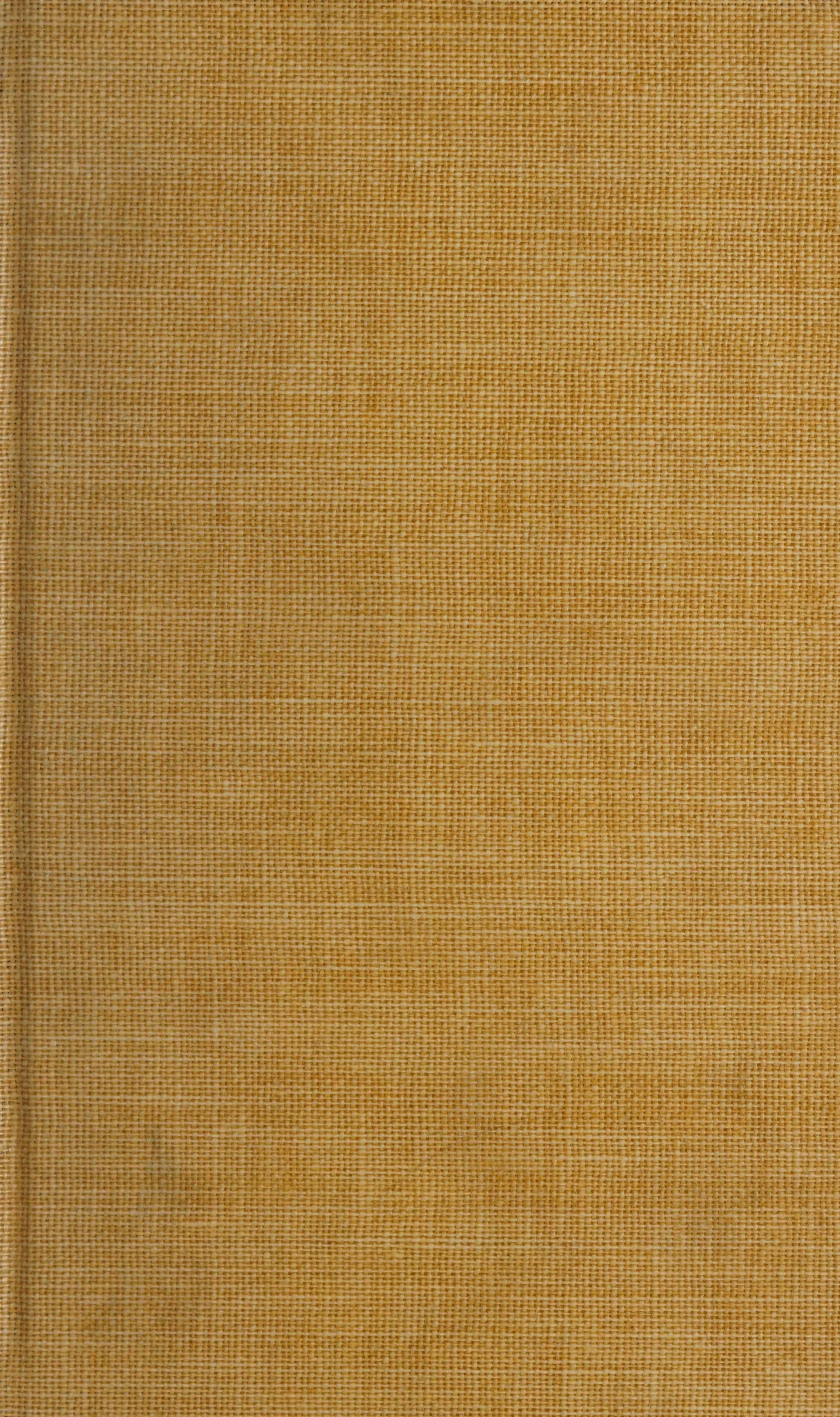
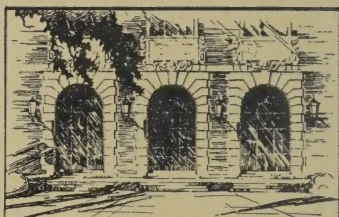






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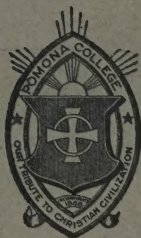
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Pomona College Bulletin

ANNUAL CATALOG

188



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UNIVERSITY OF ILLINOIS

Vol. XII

JULY, 1915

No. 4

CLAREMONT, CALIFORNIA

Published Bi-monthly by Pomona College

Entered at the Postoffice, Claremont, California, as Second-Class Matter

POMONA COLLEGE

LOCATION

Pomona College is located at Claremont, California, on the Santa Fe and the Pacific Electric Railways, 35 miles from Los Angeles. Pomona is about four miles distant on the Southern Pacific and Salt Lake Railways, and is connected with Claremont by an electric line.

CORRESPONDENCE

Claremont, California, is the post-office address for all mail intended for those connected with Pomona College.

General correspondence should be directed to the President or Pomona College.

Special correspondence regarding the admission or standing of students should be directed to the Registrar.

CORPORATE NAME

Pomona College is a corporation formed and existing under the laws of the State of California. In making bequests or legacies, the testator should use the corporation name, which is "Pomona College."

IMPORTANT ANNOUNCEMENT

Opportunities in Music

It is with special satisfaction that the authorities of Pomona College announce an increase of facilities and personnel in the Department of Music. The completion of the Mabel S. Bridges Hall with its beautiful audience room and ample accommodations for the practice and work of individual pupils, together with the installation of the splendid Möller organ, equips the College with one of the most adequate departments of Music in the country. This magnificent equipment is the gift of Mr. and Mrs. A. S. Bridges, of San Diego, in memory of their daughter, Mabel Shaw Bridges.

The College calls attention also to the addition to its music faculty of Mr. Walter Earle Hartley, of Grand Rapids, Michigan. In addition to undergraduate work, Mr. Hartley took his degree of Bachelor of Music at Yale University. This work under Professors Parker and Jepson was later supplemented by a year in Paris with M. Widor and another year in the training of voices under Dr. G. E. Stubbs of New York City. Mr. Hartley will begin his work as Assistant Professor of Organ and Piano with the beginning of the college year.

The Department of Music is an integral part of the College and is organized in the belief that college students should have some intelligent acquaintance with and appreciation of these important values. The musical interests of the College are a matter of earnest concern in the hope that this element of culture may pervade the atmosphere of the institution. So far as practicable the College is glad to place its facilities at the service of other persons not immediately associated with the regular College work. Owing to the pressure upon the facilities of the College, it is important that students desiring to register in music courses should indicate this purpose at an early date.

THE LIBRARY OF THE
MAR 3 1928
UNIVERSITY OF ILLINOIS

Twenty-seventh Year

Pomona College

ANNUAL CATALOG

Register of students for the
year 1914-1915; announce-
ment of officers and teachers
for the year 1915-1916; re-
quirements for admission,
description of courses and
general information : : : :

July, 1915

CLAREMONT, CALIFORNIA

Published by the College

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CALENDAR

1915

JULY

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1916

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COLLEGE CALENDAR

1915

<i>May 30 Sunday</i>	Memorial Day
<i>June 3 Thursday</i>	Last day for choice of studies for the following semester
<i>June 2 Wednesday</i> to <i>June 12 Saturday</i>	} Final Examinations
<i>June 13 Sunday</i>	
	Baccalaureate Sermon, 10 a. m. Annual Address before the Christian Associations of the College, 7:30 p. m.
<i>June 14 Monday</i>	Dole Prize Debate, 3 p. m. Phi Beta Kappa Anniversary, 8 p. m.
<i>June 15 Tuesday</i>	Class Day Annual Meeting of the Board of Trustees President's Reception, 4 to 6 p. m. Senior Class Play, 8 p. m.
<i>June 15 Tuesday</i>	} Annual Exhibit of the School of Art and Design
<i>June 16 Wednesday</i>	
<i>June 16 Wednesday</i>	Commencement Exercises, 10 a. m. Informal Addresses, 2 p. m. Annual Meeting of Alumni, 4 p. m. Alumni Banquet, 7 p. m.
<i>June 21 Monday</i>	Summer Session begins
<i>July 30 Friday</i>	Summer Session closes
<i>September 20 Monday</i>	} Registration Days. Monday and Tuesday, examinations for entrance
<i>September 21 Tuesday</i>	
<i>September 22 Wednesday</i>	Academic year begins, 10:30 a. m.
<i>October 14 Thursday</i>	Founders' Day
<i>Date to be chosen</i>	Mountain Day
<i>November 24 Wednesday</i>	Thanksgiving Recess begins, 10:30 a. m.
<i>November 29 Monday</i>	Thanksgiving Recess ends, 10:30 a. m.
<i>December 17 Friday</i>	Christmas Recess begins, 10:30 a. m.

1916

<i>January 4 Tuesday</i>	Christmas Recess ends, 10:30 a.m.
<i>January 13 Thursday</i>	Last day for choice of studies for the following semester
<i>January 24 Monday</i>	Kinney Freshman Contest in Declamation, 8 p. m.
<i>January 20 Thursday</i>	Day of Prayer for Colleges
<i>January 24 Monday</i> to	} Mid-year Examinations
<i>February 3 Thursday</i>	
<i>February 4 Friday</i>	} Registration Days for Second Semester. Examinations for entrance
<i>February 5 Saturday</i>	
<i>February 17 Thursday</i>	Matriculation Day
<i>February 22 Tuesday</i>	Washington's Birthday
<i>Date to be chosen</i>	Senior Mountain Day
<i>March 24 Friday</i>	Spring Recess begins, 10:30 a.m.
<i>April 4 Tuesday</i>	Spring Recess ends, 10:30 a. m.
<i>Date to be chosen</i>	Mountain Day
<i>May 30 Tuesday</i>	Memorial Day
<i>June 1 Thursday</i>	Last day for choice of studies for the following semester
<i>June 7 Wednesday</i> to	} Final examinations
<i>June 17 Saturday</i>	
<i>June 17 Saturday</i>	Choral Union Concert, 8 p. m.
<i>June 18 Sunday</i>	Baccalaureate Sermon, 10 a. m.
	Annual Address before the Christian Associations of the College, 7:30 p. m.
<i>June 19 Monday</i>	Dole Prize Debate, 3 p. m.
	Phi Beta Kappa Anniversary, 8 p. m.
<i>June 20 Tuesday</i>	Class Day
	Annual Meeting of the Board of Trustees
	President's Reception, 4 to 6 p. m.
	Senior Class Play, 8 p. m.
<i>June 20 Tuesday</i>	} Annual Exhibit of the School of Art and Design
<i>June 21 Wednesday</i>	
<i>June 21 Wednesday</i>	Commencement Exercises, 10 a. m.
	Informal Addresses, 2 p. m.
	Annual Meeting of Alumni, 4 p. m.
	Alumni Banquet, 7 p. m.

Historical Sketch

The history of the development of Southern California from a land sparsely inhabited and thought fit only for a cattle range into a genuine American commonwealth, with its multitude of prosperous communities, covers less than forty years, but those are years of intense activity and remarkable growth.

The completion of a second transcontinental railway in 1887, together with the realization of the great agricultural possibilities of the section through irrigation, induced at that time a rapid immigration and a great inflation of land values. On every hand new towns sprang up almost in a day and all the scenes of eager frontier life were being enacted.

While the dominant interests were naturally commercial and speculative, there were many among the new settlers whose chief concern was for the higher values of life and character. Not least among these were those whose former affiliations had been with New England and its institutions. The Southern California District Association of Congregational Churches, meeting at San Bernardino in 1882, agitated the question of the founding of a college of the New England type. In 1886 the Association met at Lugonia (now Redlands), when the report of the educational committee was an earnest appeal for such a college. At this meeting a larger educational committee than usual was appointed and was instructed to view locations and invite proposals of aid toward establishing a "Christian college of the New England type." In accordance with these instructions the committee visited various places from which they had received offers of aid.

In May, 1887, the District Association met in Los Angeles and became the General Association of Southern California. This General Association immediately gave full power to its committee of education, not only to select the college site, but to appoint trustees for the institution which was to be.

Fifteen trustees, three of whom are still members of the board, were duly appointed and the college was incorporated October 14, 1887, under the name of The Pomona College. The site selected was about four miles north of the City of Pomona.

For the immediate needs of the College a small private house was rented in Pomona, and in it the work of instruction was begun in September, 1888. In the following January an unfinished hotel in Claremont (now Sumner Hall), together with considerable land adjacent, was given to the college and the work was transferred to that place. Later the site originally selected was given up and Claremont was made the permanent seat of the college.

The first class was graduated in 1894, at which time the total number of college students was forty-seven. In 1914 the graduating class numbered sixty-nine and the present enrollment is five hundred and forty-one.

The original campus of about twelve acres has been enlarged by purchase and by gifts, until it now comprises over one hundred acres. A plan for the development of the campus and its buildings has been carefully worked out by competent landscape gardeners and architects, and all growth is in accordance with this harmonious plan.

The Board of Trustees is a self-perpetuating body, free from all ecclesiastical control, but pledged by the College charter to maintain an institution thoroughly Christian and thoroughly unsectarian.

From the first it has been the policy of trustees and faculty to maintain a high standing of college life and work, and to put the emphasis upon quality in the development of strong and serviceable Christian manhood and womanhood. Thus the purpose for which the College was founded is expressed in its motto, Our Tribute to Christian Civilization.

Amended Articles of Incorporation

WHEREAS, at a meeting of "The Pomona College," a corporation, duly called and held on the 21st day of February, 1907, a majority of said members being present, it was unanimously voted to amend the Articles of Incorporation of said corporation by changing the name of said corporation from "The Pomona College" to "Pomona College," and by making various amendments, as hereafter set forth, and

WHEREAS, after due and legal notice given, as required by law, the Superior Court of Los Angeles County, did on the 28th day of June, 1909, upon the petition of a majority of the members of said corporation, make an order authorizing the change of the name of said corporation from "The Pomona College" to "Pomona College," and

WHEREAS, there has been filed with the Secretary of said corporation, the written assent of more than a majority of the members of said corporation to making and filing of the amended articles of incorporation, as hereinafter set forth; now, therefore,

KNOW ALL MEN BY THESE PRESENTS:

That we, the undersigned, have this day voluntarily associated ourselves together for the purpose of forming a corporation under the laws of the State of California, and we hereby certify:

I.

That the name of said corporation shall be "Pomona College."

II.

That the purposes for which it is formed are:

(a) To establish, maintain and conduct a College and Academy of Learning, with all the powers and privileges conferred by law upon such corporation.

(b) That said College and Academy shall be distinctively Christian, in harmony with Evangelical Churches, but not sectarian, and shall be open to students of both sexes.

(c) To buy and sell, hold, rent, lease and otherwise handle or dispose of, as may be necessary for the conduct of said corporation, all kinds of real and personal property.

(d) To receive, manage and hold gifts and bequests for the use and benefit of said institution, or any work conducted by said institution or for the benefit of any person or persons concerned with said institution.

III.

The location of said College shall be at Claremont, County of Los Angeles, State of California, which shall be the location of the principal office of said corporation. The location of the Academy shall be at such place within the State of California, as may be designated by the Board of Trustees of said corporation.

IV.

That the number of Trustees shall be twenty-five. The names and residences of those chosen to act as Trustees, and who are now acting as Trustees of said corporation, are as follows:

(Here follow the names and residences of the Trustees.)

V.

There has been subscribed the following property to assist in founding the College and Seminary:

(Here follows the description of the property.)

BOARD OF TRUSTEES

GEORGE W. MARSTON, *President*, San Diego

RT. REV. JOSEPH H. JOHNSON, D. D., *Vice-President*, Los Angeles

REV. CHARLES B. SUMNER, LL.D., *Secretary*, Claremont

CHARLES E. WALKER, *Treasurer*, Pomona

Term of Office Expires, June, 1916

REV. FRANK M. DOWLING, Fullerton

RT. REV. JOSEPH H. JOHNSON, D.D., Los Angeles

FREDERICK W. LYMAN, Pasadena

BUTLER A. WOODFORD, Claremont

FRANCIS C. YEOMANS, Long Beach

Term of Office Expires, June, 1917

REV. RAYMOND C. BROOKS, D. D., Berkeley

EDWIN F. HAHN, Pasadena

STEPHEN H. HERRICK, Riverside

SEELEY W. MUDD, Los Angeles

CHARLES E. WALKER, Pomona

Term of Office Expires, June, 1918

LLEWELLYN BIXBY, Long Beach

REV. WILLIAM HORACE DAY, D.D., Los Angeles

ARTHUR M. DOLE, Pomona

REV. HENRY KINGMAN, D.D., Claremont

WILLIAM S. MASON, Evanston, Ill.

Term of Office Expires, June, 1919

JAMES A. BLAISDELL, D.D., Claremont

CHARLES E. HARWOOD, Upland

REV. CHARLES B. SUMNER, LL.D., Claremont

W. H. R. WELDON, South Pasadena

FRED M. WILCOX, Lamanda Park

Term of Office Expires, June, 1920

NATHAN W. BLANCHARD, Santa Paula

ELI P. CLARK, Los Angeles

WINFRED E. GARRISON, PH. D., Claremont

WILLIAM F. HOLT, Redlands

GEORGE W. MARSTON, San Diego

REV. EDWARD F. GOFF, *Business Manager*, Claremont

ALLEN P. NICHOLS, *Auditor*, Pomona

Committees of the Board

Executive Committee

JAMES A. BLAISDELL, Chairman
CHARLES B. SUMNER, Secretary
ARTHUR M. DOLE
CHARLES E. HARWOOD
CHARLES E. WALKER
FRED M. WILCOX
BUTLER A. WOODFORD

Committee on Ways and Means

GEORGE W. MARSTON
JOSEPH H. JOHNSON
JAMES A. BLAISDELL
NATHAN W. BLANCHARD
ELI P. CLARK
STEPHEN H. HERRICK
HENRY KINGMAN
WILLIAM S. MASON
SEELEY W. MUDD

Committee on Education

JAMES A. BLAISDELL
LLEWELLYN BIXBY
WILLIAM H. DAY
FRANK M. DOWLING
EDWIN F. HAHN

*Committee on Buildings and Grounds**

CHARLES B. SUMNER
GEORGE W. MARSTON

Committee on Nominations

JAMES A. BLAISDELL
LLEWELLYN BIXBY
CHARLES B. SUMNER

*In conjunction with a committee of the Faculty

FACULTY

JAMES ARNOLD BLAISDELL

339 College Av

President, 1910¹

B.A., Beloit College; M.A., Beloit College; D.D., Beloit College. Graduate, Hartford Theological Seminary.

EDWIN CLARENCE NORTON²

137 W. Seventh S

Dean of the College and Professor of the Greek Language and Literature on the Edwin Clarence Norton Foundation, 1888

B.A., Amherst College; M.A., Amherst College and Yale University; Ph. D., Carleton College; D.D., Pacific Theological Seminary. Graduate Student, Johns Hopkins and Oxford Universities.

FRANK PARKHURST BRACKETT

270 E. Third S

Professor of Mathematics on the Joseph W. Fiske Foundation and Director of the Observatory, 1888

B.A., Dartmouth College; M.A., Dartmouth College. Honorary Fellow, Clark University.

PHEBE ESTELLE SPALDING

261 W. Fifth S

Professor of English Literature on the Phebe Estelle Spalding Foundation, 1889

B.L., Carleton College; M.L., Carleton College; Ph.D., Boston University.

DANIEL HERBERT COLCORD

157 E. Seventh S

Professor of the Latin Language and Literature, 1890

B.A., Amherst College; M.A., Amherst College; B.D., Andover Theological Seminary. Graduate Student, Harvard University.

ARTHUR DART BISSELL

319 Harvard Ave

Professor of German, 1892

B.A., Amherst College; M.A., Amherst College; B.D., Yale University. Graduate Student, Yale University and University of Leipzig.

GEORGE GALE HITCHCOCK

Professor of Physics, 1892

B.A., University of Nebraska. Graduate Student, Johns Hopkins and Cornell Universities.

¹The date in each case denotes the beginning of original term of service.²Absent on leave, 1915—1916.

ALBERT JOHN COOK

Sacramento

Emeritus Professor of Biology, 1894

B.S., Michigan Agricultural College; M.S., Michigan Agricultural College; D.Sc., Michigan Agricultural College. Graduate Student, Harvard and Cornell Universities.

GEORGE STEDMAN SUMNER

105 College Ave.

Professor of Economics and Sociology on the Stedman-Sumner Foundation, 1897

B.A., Pomona College; B.A., Yale University; Ph.D., Yale University.

CHARLES CUMMINGS STEARNS

146 E. Tenth St.

Professor of Biblical History and Literature on the Nancy M. Lyon Foundation, 1906

B.A., Yale University; M.A., Yale University; B.D., Union Theological Seminary. Graduate Student, University of Berlin.

GRACE ELLA BERRY

Sumner Hall

*Dean of Women and Assistant Professor of Mathematics
1909*

B.S., Mount Holyoke College; M.A., Mount Holyoke College.

JAMES ALEXANDER LYMAN¹

833 Indian Hill Blvd.

Professor of Chemistry, 1909

B.A., Beloit College; M.A., Beloit College; Ph.D., Johns Hopkins University. Graduate Student, University of Chicago.

MILTON ERASTUS CHURCHILL

507 Yale Ave.

*Secretary of the Faculty and Associate Professor of German
1902*

B.A., Knox College; M.A., Knox College; Litt.D., Knox College; B.D., Yale University. Graduate Student, University of Leipzig.

MENDAL GARBUTT FRAMPTON

927 Harvard Ave.

Professor of the English Language, 1904

B.A., Illinois College; M.A., Illinois College; M.A., Harvard University. Graduate Student, Harvard and Chicago Universities.

FRANCIS HARDING WHITE

232 W. Fifth St.

Professor of History, 1905

B.A., Princeton University; M.A., Harvard University; Ph.D., Harvard University.

CHARLES GRACCHUS NEELY

1122 College Ave.

Professor of Constitutional History and Law, 1911

B.L., University of Illinois.

¹Absent on leave, second semester, 1915—1916.

WILLIAM ATWOOD HILTON 1264 Dartmouth Ave.
*Professor of Zoology on the Willard George Halstead
 Foundation, 1905*

B.S., Cornell University; Ph.D., Cornell University.

FRED ALBERT BACON 425 Harvard Ave.
Professor of Applied Music and Instructor in Singing, 1902

Student in Ohio Wesleyan University, Oberlin Conservatory
 of Music, Chicago Conservatory of Music and Chicago Musical
 College.

WILLIS ALLEN PARKER 545 Indian Hill Blvd.
Professor of Philosophy, 1912

B.A., Kansas State Normal School; M.A., Harvard Uni-
 versity; Ph.D., Harvard University.

WILLIAM POLK RUSSELL 506 E. Sixth St.
Associate Professor of Mathematics, 1904

B.A., Cumberland University; M.A., Cumberland Univer-
 sity. Graduate Student, Columbia and Yale Universities.

MARO BEATH JONES College Ave. and Eighth St.
Associate Professor of Romance Languages, 1911

B.A., Boston University. Graduate Student, Universities
 of Geneva and Barcelona. Student, Estudis Universitaris
 Catalans.

HANNAH TEMPEST JENKINS Claremont Inn
Assistant Professor of Art and Design, 1905

Graduate, Teacher's College, Columbia University. Student,
 Philadelphia Academy of Fine Arts. Pupil of Jean Paul Laur-
 ens, Constant and St. Pierre in figure and portrait, of Henry
 Thompson in landscape, and of Wm. M. Chase, Robert Vonnoh
 and Cecelia Beaux in portrait. Paris Salonist, 1889.

ROBERT TRESILIAN BELCHER 169 W. Sixth St.
Assistant Professor of Mathematics and Engineering, 1907

B.A., Queen's University. Graduate Student, Queen's Col-
 lege and University of California.

ARTHUR VOLNEY STOUGHTON 146 W. Seventh St.
Assistant Professor of Physiology and Hygiene, 1911

B.A., Pomona College; M.D., Ohio Medical University.
 Graduate Student, Medical Department of Johns Hopkins Uni-
 versity and Medical School of Harvard University. Student,
 Laboratories of Friedrichshain Krankenhaus and private labora-
 tory of Professor Pick, Berlin. Resident physician, Protestant
 Hospital, Columbus, O.

WALTER ALFRED ALLEN Claremont Inn
Assistant Professor of Musical Theory and Appreciation,
and Instructor in Organ, 1912

B.A., Beloit College. Graduate Student, Yale University.

WILLIAM LAYTON STANTON Glendora
Assistant Professor of Physical Education for Men, 1908

B.A., Dickinson College. Graduate Student, Columbia University.

LAURA CHARLTON SQUIRE 248 W. Seventh St.
Assistant Professor of Physical Education for Women, 1910

B.A., Pomona College. Graduate Student, University of California and Wellesley College.

ROBERT MARTIN STAPLES First St. and Yale Ave.
Assistant Professor of Violin, 1907

Pupil of Joachim and Dancla.

EDWARD PAYSON BARTLETT Claremont Inn
Assistant Professor of Chemistry, 1909

B.A., Dartmouth College; M.A., Harvard University.

WILLIAM SHEFFIELD AMENT¹
Assistant Professor of English, 1912

B.A., Oberlin College.

VICTOR EDWARD MARRIOTT²
Librarian, 1912

B.A., Beloit College. Graduate Student, Yale University and University of California.

IRVING OTIS PECKER Claremont Inn
Assistant Professor of Romance Languages, 1912

B.A., Boston University. Graduate Student, Boston University.

WILLIAM HOLLAND MATLOCK 306 College Ave.
Assistant Professor of German, 1913

Ph.B., Drake University. Graduate Student, Goettingen, Heidelberg and Munich, the Sorbonne and College of France.

DAVID LIVINGSTONE CRAWFORD 137 W. Seventh St.
Assistant Professor of Botany on the Henry Kirke White
Bent Foundation, 1914

B.A., Pomona College; M.A., Leland Stanford University. Graduate Student, Cornell University.

¹Absent on leave, 1915—1916.

²Absent on leave, first semester, 1915—1916.

ELLA WHITE BROWN

Smiley Hall

*Assistant Professor of English, 1915*B.S., Central Normal College; M.A., Campbell College
LL.B., Kansas University.

HOMER ELMER ROBBINS

*Assistant Professor of Ancient Languages, 1915*B.A., University of Michigan; M.A., University of Michigan.
Graduate student and holder of University and Buhl Classical
Fellowships, University of Michigan.

WALTER E. HARTLEY

*Assistant Professor of Organ and Piano, 1915*B.A. and B. Mus., Yale University. Pupil of Widor and
Stubbs.

WILLIAM HARDIN HUGHES

*Acting Assistant Professor of Psychology and Education,
1915*Ph.B., University of Chicago; M.A., University of Chicago;
Graduate Student, University of California.

MABLE CLAIR WEST

1016 Columbia Ave.

*Instructor in Piano, 1905*B.S., Pomona College. Graduate Student, Peabody Con-
servatory of Music, Baltimore.

FRANCES BENTON CLAPP

125 W. Seventh St.

*Instructor in Piano and History of Music, 1912*B.A., Pacific University; Holder of Diploma in Music, Pac-
ific University. Graduate Student, Pacific University. Student
in Piano of Alberto Jonas, Berlin, 1910-1912. Student in Theory
and Composition, Professor Paul Colberg, Dresden, 1911.

MRS. HARRY DOW KIRK

629 College Ave.

Instructor in Singing, 1912

MARY STODDARD ROOF

407 Harvard Ave.

Instructor in Physical Education for Women, 1914

B.A., Pomona College.

HARRY ALONZO BRANDT

M 10 Smiley Hall

Instructor in Economics, 1914

B.A., Pomona College.

MARRIET PASMORE¹

Instructor in Piano and Singing, 1914

B.A., University of California.

FREDERICK NEWTON EDWARDS

Instructor in Forensics and English, 1915

B.A., Pomona College; M.A., University of California.

ALFRED OSWALD WOODFORD

639 Yale Ave.

Instructor in Chemistry, 1915

B.A., Pomona College. Graduate Student, University of California.

¹Absent on leave, 1915—1916.

Administrative Officers of the Faculty

JAMES ARNOLD BLAISDELL, D.D. President's Rooms, Library
President

EDWIN CLARENCE NORTON, PH.D. Dean's Office, Holmes Hall
Dean

GRACE ELLA BERRY, M.A., Sumner Hall
Dean of Women

MILTON ERASTUS CHURCHILL, LITT.D. Secretary's Office, Room 52, Library
Secretary of the Faculty

FRANK PARKHURST BRACKETT, M.A. The Observatory
Director of the Observatory

MENDAL GARBUTT FRAMPTON, M.A. Registrar's Office, Holmes Hall
Acting Registrar

VICTOR EDWARD MARRIOTT, B.A. Library
Librarian

MARION JEANETTE EWING, B.A. Library
Assistant Librarian

GEORGIA GRACE THOMAS Registrar's Office
Assistant Registrar and Assistant Secretary of the Faculty

Other Officers

EDWARD FADE GOFF 338 Harvard Ave.
Business Manager

ERNEST EVERETT JONES, B.S. 136 E. Ninth St.
*Assistant Business Manager and Business Manager of
Student Activities*

ALLEN P. NICHOLS Pomona
Auditor

PERSIS ETHEL GEIER, B.A. 339 College Ave.
Cashier

MARY LOUISE BILLINGS 541 Harvard Ave.
General Office Secretary

SARAH LOUISE JEWELL Sumner Hall
Matron of Sumner Hall

FLORENCE MARIE FOX 339 College Ave.
Assistant in the Registrar's Office

FOREST GLENN HUTCHISON Blanchard Park
Superintendent of Grounds

CARL MAURITZ CARLSON 922 Columbia Ave.
Superintendent of Buildings

GENERAL INFORMATION

Location and Surroundings

Claremont is situated on the Santa Fe and Pacific Electric Railways, thirty-five miles from Los Angeles. It is connected by the Pacific Electric Railway with Pomona, which is four miles distant, on the Salt Lake and Southern Pacific roads. On the rim of an orchard-covered valley, which is hemmed in on all sides by lofty mountains, and with Mt. San Antonio in the immediate background, rising to a height of ten thousand feet, its location is one of rare beauty. Its water supply is taken from artesian wells at the base of the foothills. The town, which now numbers about 1800 inhabitants, owes its existence to the College and has the attractive features of the typical college town.

Buildings and Equipment

The College grounds consist of about one hundred acres, of which sixty are included in Blanchard Park, about ten in Alumni Field, and the remainder in the campus proper.

There are fourteen buildings on the college campus heated from a central heating plant.

The Mary L. Sumner Hall, named in memory of the wife of Professor Charles B. Sumner, is a dormitory affording accommodations for seventy women.

Holmes Hall, a memorial of Cyrus W. Holmes, Jr., of Monson, Massachusetts, is devoted mainly to recitation rooms, and the offices of the registrar.

Pearsons Hall of Science, the gift of Dr. D. K. Pearsons, contains the museum, and the laboratories and lecture room of the departments of chemistry, botany, physics and geology. In this building, too, is the Business Office.

The museum is equipped especially for the work in

biology, botany and zoology. It contains an abundance of good synoptical material, including about two hundred and fifty thousand zoological specimens and an herbarium of about two hundred thousand sheets of plants. The Seaver-tiers collection contains fifty thousand specimens of fossil mollusca collected in the Pliocene of Santa Monica, California, by Dr. Rivers, formerly Curator of the Museum of the State University.

The chemical laboratories are equipped with hoods, gas generators, steam baths, and the usual appliances demanded for thoroughly good work. The department is equipped throughout with water, gas and electricity and has individual desks, and equipment for one hundred and eight students.

The physical laboratories are well equipped with apparatus selected from standard patterns of the best domestic and foreign instrument makers. Each year valuable additions are made to the equipment.

The biological laboratories contain an extensive series of skeletons and models for use in comparative anatomy. For laboratory work, in general and advanced zoology, there is abundant material, both wet and dry, from all parts of the world. The reference collections for use in general and special entomology are in many respects unexcelled.

The botanical equipment, besides the herbarium, has for use in general mycology a complete bacteriological outfit of sterilizers, incubators, and cultural apparatus.

All of these laboratories possess full batteries of microscopes and microtomes, and are well equipped with all the extensive apparatus and appliances necessary in anatomical, physiological, histological, and embryological work.

The Library, the gift of Andrew Carnegie, in addition to housing the library, contains the offices of the President and the Secretary of the Faculty, the General Office, and seminar rooms. Besides the library, the College possesses three notable collections; the Cook-Baker Biological Library, the Astronomical Collection, and the Mason Collection of Californiana. The total number of volumes is nearly 22,000.

The library also receives two hundred and eighty-eight periodicals, including a majority of the best scholastic journals. In addition to these, a large number of technical publications are received in exchange for the scientific publications of the College, and are kept on file in the two departmental libraries.

The library is a depository for the publications of the Carnegie Institution at Washington, and also for the United States Government documents.

In addition to its own resources, the library has arrangements with the State Library, the State University Library and the Los Angeles City Library, whereby it can draw upon these great depositories for valuable works not found save in the largest libraries.

The Frank P. Brackett Observatory, the gift of Mr. Llewellyn Bixby, '01, is designed throughout to be of service to the student in the direct study of the stars. It stands in an attractive spot upon an elevation in Blanchard Park. Its equipment includes an equatorial telescope, with a Clark objective of six inches clear aperture, and a mounting which includes driving clock and other modern conveniences made by Wm. Gaertner of Chicago, a three-inch astronomical transit and chronograph, both made by the Gaertner Company, a standard Riefler clock for mean solar time, and a less expensive clock for sidereal time; also a horizontal telescope with a six-inch objective, having a focal length of forty feet and a coelostat. In connection with this is employed a thirteen-foot spectrograph with a two-inch grating loaned by Mt. Wilson Solar Observatory.

The Albert K. Smiley Hall, of reinforced concrete with Spanish tile roof, is the dormitory for men. It has both single rooms and suites of three rooms, affording accommodations for eighty students.

Rembrandt Hall, the first section of the Art Building, is devoted chiefly to the work of the Department of Art. The upper floor contains studio and work rooms; the lower floor

convenient auditorium of moderate size for exhibits and assemblies.

The Mabel S. Bridges Hall of Music, the gift of Mr. and Mrs. Appleton S. Bridges, of San Diego, just completed, offers opportunities for the study of music unexcelled in Southern California. Besides numerous studio and practice rooms it contains a large auditorium and a three manual pipe organ. It is here that the daily chapel service is held as well as the concerts of the Choral Union and the recitals of the faculty and students. The building is of reinforced concrete with Spanish tile roof.

The Renwick Gymnasium contains ample equipment for physical training, together with shower bath and locker facilities to make of the highest usefulness the swimming pool which adjoins it.

The Claremont Inn has, besides a large student dining room and club room for the College Commons, accommodations for eighty guests.

The Greek Theater, built to take advantage of the natural setting of Blanchard Park, though uncompleted, has at present a seating capacity of over 4000. Here the great historical Pageant was given in 1913; here are given the senior plays, various concerts and entertainments; and here are held student rallies about bonfires built in the center place.

The Agricultural and Botanical Laboratory, situated near the Pearsons Hall of Science, consists of a greenhouse, a hothouse and a central class room.

The Marine Laboratory, located at Laguna Beach, has nine private rooms for special workers and two general laboratories, as well as storerooms, work room and aquarium room.

Various other smaller buildings add to the completeness of the College plant.

Honors and Prizes

General Scholarship Honors and Special Departmental Honors are announced at the close of each semester.

General Scholarship Honors are awarded to those who have attained a grade of at least A in all courses pursued and are open only to matriculated students who are all candidates for a degree.

Special Departmental Honors are awarded to those who have attained AA grade in at least one course and have not fallen below B in any other.

The Dole Prizes. A prize debate, open to the Sophomore class, upon some subject selected by the faculty, is arranged for the close of the second semester. First and second prizes of ten and five dollars respectively, established by the late Mr. J. H. Dole, in memory of his brother, Mr. W. B. Dole, are endowed by Mr. J. Albert Dole and Mr. A. M. Dole.

The Mudge Latin Prizes. Prizes for excellence in Latin are offered to Sophomores completing Latin B3 and B4. First and second prizes of ten and five dollars respectively are endowed by friends of the College.

The Llewellyn Bixby Mathematics Prize. A prize for excellence in Analytic Geometry and Calculus; open to all students completing Mathematics C17 and C18. A prize of ten dollars is given by Mr. Llewellyn Bixby.

The Kinney Prizes. A prize declamation contest, open to the members of the Freshman class, occurs toward the end of the first semester. First and second prizes of ten and five dollars, respectively, are given by Mrs. H. N. Kinney.

The Vaile Prizes. Prizes for the best essay or oration on the general subject of Agriculture in Southern California open to the Junior and Senior classes. First and second prizes of ten and five dollars respectively are endowed by Mr. Charles S. Vaile.

The Lorbeer Prizes. Prizes for the best essay on the subject, "How to Keep Well"; open to all who take the course in Anatomy and Physiology. First and second prizes of five

teen and ten dollars respectively are given by Dr. Thomas L. Lorbeer, '03.

The Moncrieff Astronomy Prize. A prize given to the student in a first year course in Astronomy, taken regularly in class, whose interest in the study and proficiency in the observatory work are indicated by the best notebook kept in accordance with the teacher's suggestion. A prize of ten dollars is given by Miss Flossie C. Moncrieff, '11.

The George A. Gates Prize. A prize given for the best paper upon one of five subjects, dealing with social betterment, selected by the teachers of History and the social sciences. A prize of twenty-five dollars is endowed by certain Alumni and other friends of Dr. Gates.

The Hager Prizes. Prizes for the best three essays on a foreign missionary subject, open to all students. Prizes of five dollars each are endowed by Mr. and Mrs. C. R. Hager.

Phi Beta Kappa

A chapter of the national scholarship honor society, Phi Beta Kappa, was established at Pomona College, March seventh, 1914. Upper classmen "who are of good moral character, who are candidates for the degree of Bachelor of Arts, and who are distinguished for breadth of culture and excellence of scholarship," are eligible to membership.

Oratorical and Debating Contests

Many opportunities are offered students for obtaining experience in public address. The Associated Students maintain three oratorical contests, the winners of which represent the College in intercollegiate competition and there are each year college and freshman intercollegiate debates. A Women's Oratorical Contest for upperclass women is conducted by the College. The aim of these contests is to stimulate the students to excellence in public address, and to quickness of thought in extemporaneous speaking.

Student Activities

THE ASSOCIATED STUDENTS. This association harmonize all student activities. Its officers are chosen by the student body from their own number. All important questions are considered by its executive committee, which is composed of those prominent in such varied lines as athletics, oratory, and the editorship of the Student Life. This body has charge of intercollegiate as well as inter-class relations.

MEN'S ORGANIZATION. The men of the student body form a voluntary organization electing their own officers and committees and holding regular meetings. This organization controls largely the class and social relations of the men.

WOMEN'S ORGANIZATION. The women of the student body form a similar organization, for considering and regulating the social relations of the women.

CHRISTIAN ASSOCIATIONS. Branches of the Young Men's Christian Association and the Young Women's Christian Association are well organized and doing effective work. Representation in the inter-collegiate and state conventions and the visits of active workers from outside serve to maintain interest in the work both at home and abroad. Through the co-operation of the associations and the College there have been established, as a part of the curriculum, courses in Bible study adapted to all classes of students and conducted by members of the Faculty.

THE POMONA COLLEGE LITERARY SOCIETY, composed of both men and women, meets every two weeks. The work is varied in character, covering all literary lines.

THE POMONA COLLEGE DEBATING CLUB is composed of men. It meets every two weeks for prepared and impromptu debates on the live issues of the day.

THE ALPHA KAPPA is a society for women, giving drill in debates and familiarity with important current topics.

THE POMONA COLLEGE LYCEUM, composed of men, is also a debating club, and meets bi-weekly.

THE AREOPAGUS is composed of men. The object of the society is to promote efficiency in public speaking, debate, and parliamentary drill. Meetings are held every two weeks.

THE DELTA LAMBDA is a debating society for women, meeting bi-weekly.

THE MASQUERS is an organization of students, whose purpose is the study and presentation of plays and the general promotion of the dramatic enterprises of the undergraduate body.

PUBLICATIONS. The *Student Life* is published semi-weekly by the student body. One issue of each month consists of a magazine number, *The Scribbler*; the other issues are devoted to current affairs.

The *Metate* is published each year by the Junior class, and contains material appropriate to a college annual.

The *Association Hand Book*, which contains material of value, especially to new students, is issued at the beginning of the year by the Christian Associations.

ATHLETICS. The immediate management of all contests and games rests with the Associated Students, though all arrangements are under the supervision of a committee of the Faculty and a student manager.

Alumni Field, consisting of about ten acres, has been developed by the alumni into athletic grounds unsurpassed in the Southwest in equipment and beauty of setting. First-class tennis courts, an excellent track, baseball and football fields, also hockey and basket ball courts are within the limits of the campus, and athletic exercises and field sports are encouraged by the officers of the institution.

A swimming pool, of the standard size for water polo, and fully equipped with modern appliances, is open to all students. An invariable condition to the use of the pool is a semi-annual medical examination.

Students are required to maintain a certain standard of excellence in all their studies in order to represent the College on any of its athletic teams or other organizations coming before the public.

Departmental Activities

THE CHORAL UNION is an organization of students and members of the community for drill in choral work. It meets each Thursday evening for practice under the direction of the Department of Music, and twice each year gives a public concert.

THE POMONA COLLEGE Glee Club, the Pomona College Women's Glee Club, the Pomona College Orchestra, and the Pomona College Band are flourishing organizations under the general direction of the Department of Music.

THE REMBRANDT CLUB is an organization of students and members of the community which meets once a month for art study, programs on art subjects, and social intercourse.

THE ASTRONOMICAL SOCIETY aims to help the observatory in its work, in building up its library and in the issuing of its publications. The associate membership is drawn from the alumni and friends of the College, while the active membership includes the students of astronomy together with members of the faculty and resident graduates.

THE BIOLOGICAL SEMINAR. The aim of the Biological Seminar is chiefly the review and discussion of recent and important researches as published in the biological journals. Membership is limited to students of the Junior and Senior classes chosen for excellent scholarship and marked interest in the work of the department, who meet every two weeks with the faculty of the Biological Department.

THE MATHEMATICAL SOCIETY. The Society of Mathematical and Physical Science meets every month for presentation and discussion of results of study and investigation in the physical sciences and mathematics. It is open to advanced students who are interested in these subjects and who agree to take an active part in its work.

THE SCIENCE CLUB. The Biological Seminar, the Mathematical Society and the active membership of the Astronomical Society constitute three sections of the Science Club.

which holds open meetings bi-monthly. Its programs are of general scientific interest and its meetings are open to students and public.

THE LITERATURE SEMINAR. The purpose of the Literature Seminar is the presentation from a graduate or professional point of view of those masterpieces of literature which have dominated the content and form of other literature. The meetings are monthly and are open to students and community.

DER DEUTSCHE VEREIN is composed of those who have had at least three years of work in German. It meets every two weeks for the reading and discussing of papers in German and for other exercises which tend to cultivate fluency and accuracy in the use of the language.

LE CERCLE FRANCAIS, composed of students making a specialty of the French language, meets fortnightly for practice in French conversation, presentation of papers and discussion of topics relating to the various aspects of French life and literature.

EL CIRCULO ESPANOL, composed of students making a specialty of Spanish, meets fortnightly for practice in Spanish conversation and the presentation of appropriate papers on the language, bearing upon the literature and life of the Spanish world.

College Publications

Most of the publications of the College appear in The Monona College Bulletin, which is issued bi-monthly, and include:

1. The Annual Announcement of the officers and teachers for the ensuing year, with requirements for admission, description of courses and general information. Published in May.
2. The Annual Register of officers, teachers and students for the current year. Published in March.

3. The Annual Directory of officers, teachers and students. Published in October.
4. The Register of Graduates.
5. The Register of Non-graduates.
6. The Report of the President.

Alumni and departmental publications include:

The *Pomona College Quarterly Magazine*, devoted to interests of the College and Alumni.

The *Journal of Entomology and Zoology*, published under the auspices of the Department of Zoology.

The *Pomona College Journal of Economic Botany*, published under the auspices of the Department of Botany.

The *Publication of the Astronomical Society of Pomona College*, published under the auspices of the Department of Astronomy.

Bureau of Appointments

A Bureau of Appointments is conducted in connection with the office of the Secretary of the Faculty for the benefit of members of the College who desire to teach after graduation. The purpose of the Bureau is to maintain a list of available positions and to recommend from the applicants registered those who are qualified for specific positions.

An opportunity is also offered graduates of the College who are already engaged in teaching, to register their present positions and to indicate whether they desire a change, and, if so, under what conditions. An effort is made to further the desires of graduates so far as made known. The services of the Bureau are entirely gratuitous. Communications should be addressed to Professor M. E. Churchill, Secretary of the Faculty.

Registration

INFORMAL REGISTRATION—*Prospective Students.* All who desire to enter Pomona College should file their application with the Registrar as early as possible. These applications

should specify the class which the applicant desires to enter, the time when he wishes to enter, and the work he offers for entrance as well as for advanced credit if any. The statement of work done must be certified to by the proper officer. Specially prepared blanks for these applications may be obtained from the Registrar. In 1915 the freshman class will be limited to two hundred students, one hundred men and one hundred women.

Resident Students. On or before the first Thursday in January and the first Thursday in June all resident students must fill out, in consultation with their class advisers, a preliminary registration schedule designating their choice of subjects for the following semester. A fee of one dollar must be paid for any subsequent change.

FORMAL REGISTRATION. 1. All students are required to register formally on one of the regularly announced registration days preceding the opening of the class work of each semester. A payment of two dollars is required for later registration, and a payment of one dollar for every change in formal registration. This latter payment is remitted in the case of new students registering for the first time, provided the changes are made within a week of the opening day of the registration period.

2. Students are admitted only to those courses for which they are formally registered.

Reports

A record of the scholarship and deportment of each student is kept, and deficient students are reported to the Registrar. Special reports are made at or near the Thanksgiving and Spring recesses and notification is sent to the parents of any students reported as conditioned or failing at that time.

The grade of scholarship is determined by the daily work of the class-room supplemented by frequent test reviews and by final examinations.

The aim is to encourage faithfulness and regularity in

daily work rather than spasmodic effort to meet some sin test.

Public Assemblies

Devotional exercises conducted by the President, the members of the faculty in turn, or by some invited guest, are held in the chapel every week-day morning, except Tuesday, and all students are expected to be present.

On Thursday morning of each week and in exceptional cases on Monday or Wednesday the time of the usual Chapel hour is devoted to addresses by guests of the College or members of the faculty. On Saturday morning, as occasions arise, the chapel service gives way to general gatherings of faculty and students for the presentation and discussion of matters of general interest and to the regular and called meetings of the Associated Students.

Attendance upon the Sunday morning service in the Claremont Church is expected except in cases where permission is given to attend services elsewhere. Such permission will be granted on request.

General Requirements

Students are expected to be loyal to the spirit and purpose of the institution and to maintain regular attendance on college appointments. Any who fall below grade in scholarship, or who for any reason do not prove desirable members of the student body, may be dismissed without special charges.

It is urgently pointed out to both students and parents that the value of a college education consists in no small degree in the fullest participation in the college atmosphere and life. It is important, therefore, that all absence throughout the college year should be avoided. Some of the most important of the college values are lost by absences on Saturday and Sunday, on which days are centered particular and vital phases of the common life, and it is therefore urged that over-Sunday visits at home or elsewhere be avoided.

The use of tobacco is disapproved and discouraged at all times.

A copy of the Manual of Procedure may be obtained by application to the Registrar. It should be in the hands of all students.

Student Aid

SCHOLARSHIP FUNDS. The income of certain funds is used toward paying the tuition fees of students who are in pecuniary need, and, by authorization of the trustees, is distributed annually through a committee of the faculty. Scholarship aid is given only to students who are or intend to become candidates for a degree from Pomona College, who maintain a high standard of honor, who are economical in their habits, who do not use tobacco, who are regular in their attendance upon college exercises, and whose scholarship meets the following conditions: They must earn in the first semester of the Freshman year at least twelve credits; in each subsequent semester at least fifteen credits.

Applicants for aid who have not yet entered college should forward to the Dean of the College, E. C. Norton, a formal application accompanied by two letters, one from parent or guardian and the other from principal or teacher, giving information concerning need, character and attainments. They should also send a certified statement of their scholastic record. All applications for aid must be renewed annually on or before May first.

Aid may be withdrawn at any time from students who have not to have conformed to the conditions, and is permanently withdrawn after the second forfeiture due to low standing or unsatisfactory deportment.

Recipients of scholarship aid may be called upon to assist the College in ways that do not interfere with their studies. \$4,000. The Lydia Phelps Memorial Fund, given by William E. Phelps of Ontario, California, in memory of his wife.

\$1,000. The Agnes K. Crawford Memorial Fund, given by David R. Crawford and William Crawford of Pomona, California, in memory of their mother.

\$2,000. The John D. Potter Memorial Fund, given by Mrs. S. T. Potter of Westboro, Mass., in memory of her husband.

\$5,000. Given by Mrs. Loraine H. Page of Pomona, California. (\$3,000 of this may at some time be used for other purposes.)

\$1,500. The Francis Bancroft Memorial Fund, given by Mrs. James T. Ford of Los Angeles, California, in memory of her father.

\$2,500. Given by Rev. James T. Ford of Los Angeles, California.

\$2,500. Given by Mrs. Maria T. Wardwell of Plymouth, Connecticut.

\$1,000. The Henry Herbert Brown Scholarship Fund, given by Mrs. Fannie E. Brown of Los Angeles, California, in memory of her son.

\$2,600. Given by Mary E. Elwood of Redlands, California.

\$3,500. The Mabel S. Bridges Memorial Scholarship, given by Mr. and Mrs. A. S. Bridges of San Diego, California, in memory of their daughter. Available for women.

\$1,000. The H. G. Billings Memorial Scholarship, given by Mrs. E. A. Billings of Los Angeles, California, in memory of her husband.

\$2,000. The Thomas F. Howard Memorial Scholarship, given by Dr. and Mrs. H. G. Brainerd of Los Angeles, California, in memory of Mrs. Brainerd's father.

\$1,200. Given by Miss Jean Loomis, '97, of Pasadena, California.

\$1,800. Given by Dr. Anna H. Searing of Escondido, California.

\$400. The Bristol Memorial Fund. A fund raised in memory of the Reverend Sherlock Bristol.

2,000. The Arthur Warren Phelps Memorial Scholarship, given by Mrs. C. S. and Mr. C. A. Phelps of Claremont in memory of their son and brother.

SELF-SUPPORT. A committee of the faculty endeavors to secure employment for students needing to earn a part of their expenses. Many are thus helping themselves by various kinds of labor such as janitor work, waiting on tables at the Commons, general house work, gardening and the like. The most desirable positions are in general secured by upper-division men who have proven themselves good workers and good students, and those coming to the College for the first time should be content if any work which they can satisfactorily do is secured for them. Students in any case should be prepared to pay all bills for at least one semester. Their record during this semester will be a large factor in deciding what opportunities for self-help will be open to them. Applications for aid in securing employment should be addressed to Professor F. H. White, the chairman of the Committee on Student Aid and Labor.

Physical Attention

The physical care of students is a matter of special concern to the College and the advantages of unusual attention and opportunity are offered. The climate of Southern California offers an out-of-door life the year around. Oversight is given to open-air athletics in all seasons. A regular physician is on the faculty of the College. Every student entering has a physical examination. Regular work in Physical Culture is prescribed throughout the course. A large swimming pool is provided, access to which is free to all students, subject only to a semi-annual physical examination. The College physician gives courses in Physiology and Hygiene and his medical advice is ordinarily available free of charge to all students subject to certain conditions as to hours and location of residence, the College meeting these expenses; providing that all nursing, surgical dressing, and

medicines are at the expense of the ill or injured. *College, however, reserves the right to discontinue the individual medical service at any time without previous notice.* As a natural result of all this attention the health of the College is such as to give special assurance to all continuing attendance at Pomona.

Expenses

ROOMS. Lists and descriptions of rooms available for students are kept at the Business office, for women students at Sumner Hall. Furnished rooms outside the College buildings are rented at prices ranging from twenty to forty dollars for the semester. Students are permitted to live only at places approved by the faculty.

To avoid misunderstanding between students and room holders, it is advised that agreements regarding room be put in written form. Unless written agreement to the contrary is made, it will be assumed that rooms are rented one semester.

Change of rooms is made only by permission of the faculty.

DORMITORIES—*Sumner Hall.* Women not living in their own homes, unless excused by the faculty, are expected to live in a room in Sumner Hall, which accommodates seventy. It is a commodious and pleasant hall, where the young women come under the direct care of the Dean of Women. In addition to the parlors, which are open to the students for the reception of their friends, there is also on the first floor a large and attractive recreation hall.

Sumner Hall is well equipped with all modern conveniences, including electric lights, steam heat, baths, and laundry furnished with stationary tubs and electric iron for the use of roomers.

There are both single and double rooms, which are lighted and ventilated. Each room is provided with necessary furnishings, including rug for the floor.

y articles to be supplied by the students are towels and
en and covers for a single bed.

Careful attention is given to the health of the young
men residing in the Hall. Illness is rare, yet for such
es as occur, there is provided, opening directly from the
tron's room, a pleasant, sunny rest-room, where patients
e given the best of care.

Rooms in Sumner Hall are rented for the year at prices
anging from forty to seventy dollars, according to the loca-
n and desirability of the room and the number of occu-
nts. The Hall is closed during the Christmas and Spring
cations. A deposit of five dollars is necessary to secure
room in the Hall, and should accompany the application.
oms are assigned in order of application. The deposit
e is credited on the rent of the room.

Information concerning the dimensions of rooms, number
windows, and similar matters, may be obtained at the
siness office. The Hall is opened on the Saturday before
e beginning of the college year and closed the Saturday
ter Commencement.

Smiley Hall. A dormitory for men, has both single rooms
d suites of three rooms accommodating two students. The
rmitory has all modern conveniences and is completely fur-
shed. The only articles to be provided by the students are
wels, and linen and covers for a single bed. All rooms are
ually desirable, the basis of choice in most cases being one's
eference for the eastern or western outlook.

Rooms in Smiley Hall are rented for the college year, each
cupant paying sixty dollars. In case of withdrawal be-
euse of sickness an equitable adjustment of rent will be
ade.

These terms do not include the use of the dormitory dur-
g the Christmas and Spring vacations, when the Hall will
e closed, unless a number desire to remain, in which case
e cost of keeping the building open will be an additional
harge. Damage to rooms will be charged to the occupants.

A deposit of five dollars is necessary to secure a room should accompany the application. The amount is credited on the year's rent. The dormitory is opened on the Saturday before the beginning of the college year and closed the Sunday after Commencement.

The College reserves the right to dismiss from the dormitory without rebate any student who has shown himself a disturbing or undesirable occupant.

BOARD. Provision is made for the boarding of students in the College Commons, an unusually attractive and well-equipped dining room in the Claremont Inn. An entertainment committee of students provides music and other amusements that add to the enjoyment of the meal time. Boarding rates are the lowest consistent with good quality of food and efficient service, varying from \$18 to \$22 per month.

The Pomona College spirit is due in no small measure to its common dining hall. There the students meet in pleasant surroundings, are waited upon by companions in student dress, discuss together college topics, join in enthusiastic backing of college teams and glee clubs and have favorable opportunities for forming close and lasting friendships. For these reasons and for its unifying influence on college life, the faculty regard it as exceedingly desirable that students should board at the Commons.

Those wishing to board at other approved places may do so by permission of the faculty, but such permission is rarely be given to those living in college buildings.

SUMMARY OF EXPENSES—The necessary expense for a college year, exclusive of fees for special courses and other expenses which are purely personal, varies from \$275 to \$300. Bills are due each semester in advance and must be paid upon registration. If parents desire bills to be sent home, a written request should be made before the beginning of each semester.

No student will be retained in the institution or given an honorable dismissal whose bills are not paid or arranged

Tuition

All tuition bills must be paid at the beginning of each semester. Until this has been done cards entitling the student to admission to classes will not be issued. The regular charge for tuition is composed of two items; General Charge, uniform in amount, which is required of all students, and an Instruction Charge, varying with the amount of work taken.

GENERAL CHARGE

Required of all students, per semester (18 weeks)....\$15.00

INSTRUCTION CHARGE

In all branches there is a further Instruction Charge varying according to the number of Credit Hours assigned to each course. The normal amount of work varies from 16 to 18 hours.

For each hour taken, per semester (18 weeks).....\$2.00

ADDITIONAL CHARGE FOR APPLIED MUSIC AND ART

In addition to the General Charge and the Instruction Charge, students taking Applied Music or Art will pay an additional Charge as follows:

For half-hour private lessons in piano, voice, organ or violin, per semester:

Advanced instruction, two lessons each week.....	\$50.00
Advanced instruction, one lesson each week.....	25.00
Elementary instruction, two lessons each week....	36.00
Elementary instruction, one lesson each week.....	18.00

For two-hour class lessons in Art, per semester:

Two lessons each week	20.00
One lesson each week	10.00
Pen and Ink, one lesson each week for 9 weeks....	5.00
Sketch Class	1.00

Students may register for applied music and art at any time. Such students, if they enter during a semester, should consult the Registrar as to charges.

Fees

Diploma fee, \$5.00.

Physics and Chemistry, deposit for breakage, \$5.00.

Laboratory fees range from \$4.00 to \$15.00. The fee for a given course is stated in connection with description of that course under Departments of Instruction; in advanced courses only does it exceed \$10.00.

The fees for the use of college pianos for practice are as follows:

One hour a day for a semester.....	\$
Two hours a day for a semester.....	
Three hours a day for a semester.....	

RETURN OF TUITION

The General Charge of \$15.00 is retained from the tuition of students withdrawing within two weeks subsequent to the first day of registration of any semester. After that time there is no refunding of any part of the tuition either for courses dropped or for failure to complete a semester of residence, except that one half of the Instruction Charge and of the Additional Charge, if any, is refunded to students leaving college before the middle of any semester on account of illness.

Requirements for Admission

General Requirements and Methods of Admission

It is the purpose of Pomona College to do a distinctly and notably high grade of work, thus preparing its graduates for special distinction in such later callings as they may choose. To this end the College wishes to receive only such students as are thoroughly prepared to enter upon college work. Students planning to enter Pomona College should indicate their purpose to the Registrar of the College as early as possible. The College is prepared to give advice and cooperation to prospective students several years in advance of their actual entrance upon college work in order that they may have the most thorough and complete preparation. Students should not leave the matter of their formal application for admission until the entrance day of the year, as the College authorities will carefully scrutinize all applications for admission, and delay in filing applications will inevitably involve delay in acceptance. Only two hundred freshmen, one hundred men and one hundred women, will be received in 1915.

Candidates for admission to any class in Pomona College must present satisfactory evidence of their fitness for college both in character and in scholarship. Testimonials of good moral character and a certificate of honorable dismissal from the last institution attended are required. A medical examination conducted by an authorized physician, under the direction of the Department of Physical Education, is required of all students. Evidence of satisfactory scholarship and of the completion of the required amount of study as indicated in the following pages may be given in one of three ways:

First: Examination by the College.

Students wishing to remove deficiencies by examination

must do so before entering upon college work. Such examinations must be taken during the first three days of registration week of either semester or (by special arrangement) the week preceding the college commencement. They must be arranged for in advance through the Registrar.

Second: Certificate of the College Entrance Examination Board.

Examinations are given by the College Entrance Examination Board at certain times and places which may be learned from the Registrar or from principals of secondary schools. These examinations for Southern California were given in 1915 at Pomona College.

Third: Certificate from approved schools or colleges.

Students from approved schools or colleges are admitted without examination on presentation of a certificate signed by the principal or proper official and showing in detail the requisite completed courses. Certificate blanks obtained from the Registrar should be filled out and returned as early as possible after the completion of the high school year.

Requirements for Matriculation

The standing of all students is provisional until after they have been in residence for one semester. At that time those are matriculated who have shown themselves in accordance with the spirit of the College, who have done a satisfactory quality of work during their semester of residence and whose entrance units have been accepted.

Admission to Freshman Standing

The number of students admitted to the freshman class is limited to two hundred—one hundred men and one hundred women; early application is therefore advised. Special blanks for this purpose may be had by addressing the Registrar. Applications are listed in the order of their receipt, are considered individually, and in every case must

accompanied by a certification both as to scholarship and character. No application is considered which does not show fifteen units in accepted subjects, at least ten of which are recommended. Special endorsement by the Principal must accompany all papers showing non-commended units, such endorsement to include the specific recommendation of the candidate, both as to character and ability, for the undertaking of college work. Not later than the first of July notification is sent to those whose credentials are satisfactory and from time to time other applicants are so notified. No applicant, however, is finally enrolled among those definitely accepted, until the sum of \$15 has been deposited with the Registrar as a first payment on tuition. This sum is returned upon request received before the first of September, but not thereafter.

Those are matriculated to full standing who at the end of a semester's residence meet the requirements stated just above; those who do not meet those requirements are not allowed to matriculate and are enrolled as in partial standing. No student in partial standing is recommended to college standing in another institution. The final acceptance of entrance units is based upon the character of the work done in class at Pomona College as well as upon the grade of the units presented.

Admission to Advanced Standing

Students who have sufficient credit from other institutions are admitted to advanced standing on credentials signed by the proper officials and giving full specifications concerning the nature of the courses taken, the time spent in each, together with their rank in each subject. They are assigned hours and credits* on the basis of their credentials, but such assignment is provisional until ratified by the Classification Committee. This ratification is not given until after the

*Credits are based upon the grades attained in the work offered. See page 55.

required semester's residence, at which time the Committee has power to act in adjusting hours or credits, or both, to the qualifications shown.

Admission as Special Students

Mature students, ordinarily only such as are at least twenty-one years of age, may be admitted as special students to courses for which by ability and preparation they may be fitted. Special students are not candidates for a degree.

Credits for Non-Commended Work

Students who enter with some of their work non-commended may remove their deficiency in one of three ways: by examination, by continuing the same line of study in college with high grade or by extra work in college not counted towards a degree. These three methods are more fully described as follows:

First: Students may be examined upon any of the accepted subjects presented for entrance, and upon passing with B grade receive credit toward entrance for that subject. Such examinations must be taken as specified on page 44.

Second: Entrance credit will be given for non-commended work after a student has completed with A grade two or more college courses in the same or a closely allied subject, or upon conditions laid down in individual cases by the Classification Committee.

Third: Entrance credit may be gained by work in certain college courses, but such courses cannot count toward the number of hours or credits required for graduation, nor for honors. Moreover, students may not substitute for subjects specifically required for entrance other subjects taken in this way.

Students are not candidates for a degree nor are they eligible for recommendation to college standing in another institution until they have matriculated. Students are

matriculated only after they have come into full standing. All students must be matriculated before attaining to Junior standing.

Courses Required for Admission to Freshman Standing

In the following outline of courses a "unit" represents a course of study in one subject of high school grade involving five forty-five minute recitations per week or an equivalent for a school year. Laboratory periods should be at least twice the length of recitation periods.

Not less than one unit in any subject is normally accepted, though a half unit may be accepted when accompanied by units for courses in allied subjects.

I. *Specific Requirements—8 units*

English, 2 units	Algebra, 1 unit
History, 1 unit	Geometry, 1 unit
One foreign language, 2 units	*One third or fourth year lab- oratory science, 1 unit

II. *Additional Requirements—4 units*

Selected from the following:

English	Mathematics
History	*Laboratory Science
Foreign Language	

III. *Elective—3 units*

It is recommended that these electives be chosen from the subjects of Group II above, but in view of the importance of other lines of high school work credit is allowed for full units in other courses counted for high school graduation the acceptance of which is specifically recommended by the principal of the school.

* Heads of Departments in which students wish to continue laboratory subjects begun in high school may, at their option, require the high school note books to be submitted as evidence of ability to continue with more advanced work in the department.

Description of Subjects

The College recommends that the work offered to meet the requirements of Groups I and II above shall cover the ground indicated in the following description of courses. Each of them constitutes one unit unless otherwise designated.

Elementary English.

Rhetoric, composition and literature. (2 units.)

Intermediate English.

Advanced English.

The following list is made the basis of examination. indicates books selected for careful reading; B those requiring close study.

A. From each of the following groups at least two selections are to be made, except as otherwise provided under Group I.

Group I—Classics in Translation

The Old Testament, comprising at least the chief narrative episodes in Genesis, Exodus, Joshua, Judges, Samuel, Kings, and Daniel, together with the books of Ruth and Esther; the Odyssey, with the omission, if desired, of Books i-v and xv-xvii; the Iliad, with the omission, if desired, of Books xi, xiii-xv, xvii, and xxi; the Aeneid. The Odyssey, Iliad, and Aeneid should be read in English translations of recognized literary excellence.

For any selection from this group a selection from another group may be substituted.

Group II—Shakespeare

Midsummer Night's Dream; Merchant of Venice; As You Like It; Twelfth Night; The Tempest; Romeo and Juliet; King John; Richard II; Richard III; Henry V; Coriolanus; and the following, if not chosen for study under B, Julius Cæsar; Macbeth; Hamlet.

Group III—Prose Fiction

Malory's Morte d'Arthur (about 100 pages); Bunyan's Pilgrim's Progress, Part I; Swift's Gulliver's Travels (voyages to Lilliput and to Brobdingnag); Defoe's Robinson Crusoe, Part I; Goldsmith's Vicar of Wakefield; Frances Burney's Evelina; Scott's Novels, any one; Jane Austen's Novels, any one; Maria Edgeworth's Castle Rackrent, or

The Absentee; Dickens's Novels, any one; Thackeray's Novels, any one; George Eliot's Novels, any one; Mrs. Gaskell's Cranford; Kingsley's Westward Ho! or Hereward, the Wake; Reade's The Cloister and the Hearth; Blackmore's Morna Doone; Hughes's Tom Brown's Schooldays; Stevenson's Treasure Island, or Kidnapped, or Master of Ballanrae; Cooper's Novels, any one; Poe's Selected Tales; Hawthorne's The House of the Seven Gables, or Twice Told Tales, or Mosses from an Old Manse; a collection of Short Stories by various standard writers.

Group IV—Essays, Biography, Etc.

Addison and Steele's The Sir Roger de Coverley Papers, or Selections from the Tatler and Spectator (about 200 pages); Boswell's Selections from the Life of Johnson (about 100 pages); Franklin's Autobiography; Irving's Sketch Book (about 200 pages), or Life of Goldsmith; Southey's Life of Nelson; Lamb's Essays of Elia (about 100 pages); Lockhart's Life of Scott (about 200 pages); Thackeray's Lectures on Swift, Addison, and Steele in the English Humourists; Macaulay's Lord Clive, Warren Hastings, Milton, Addison, Goldsmith, Frederic the Great, Madame d'Arblay, any one; Trevelyan's Life of Macaulay (about 200 pages); Ruskin's Sesame and Lilies, or Selections (about 150 pages); Dana's Two Years before the Mast; Selections from Lincoln, including at least the two Inaugurals, the Speeches in Independence Hall and at Gettysburg, the Last Public Address, and the Letter to Horace Greely, together with a brief memoir or estimate of Lincoln; Parkman's The Oregon Trail; Thoreau's Walden; Lowell's Selected Essays (about 150 pages); Holmes's The Autocrat of the Breakfast Table; Stevenson's An Inland Voyage and Travels with a Donkey; Huxley's Autobiography and selections from Lay Sermons, including the addresses on Improving Natural Knowledge, A Liberal Education, and A Piece of Chalk; a collection of Essays by Bacon, Lamb, DeQuincey, Hazlitt, Emerson, and other writers; a collection of Letters by various standard writers.

Group V—Poetry

Palgrave's Golden Treasury (First Series): Books II and III, with special attention to Dryden, Collins, Gray, Cowper, and Burns; Palgrave's Golden Treasury (First Series), Book IV, with special attention to Wordsworth, Keats, and Shelley (if not chosen for study under B); Goldsmith's The Traveller and The Deserted Village; Pope's The Rape of the Lock; a collection of English and Scottish Ballads, as,

for example, some Robin Hood ballads, The Battle of Otterburn, King Estmere, Young Beichan, Bewick and Grahame, Sir Patrick Spens, and a selection from later ballads; C. S. Lewis's The Ancient Mariner, Christabel, and Kubla Khan; Byron's Childe Harold, Canto III or IV, and The Prisoner of Chillon; Scott's The Lady of the Lake, or Marmion; Macaulay's The Lays of Ancient Rome, The Battle of Naseby, The Armada, Ivry; Tennyson's The Princess, or Garth and Lynette, Lancelot and Elaine, and The Passing of Arthur; Browning's Cavalier Tunes, The Lost Leader, How They Brought the Good News from Ghent to Aix, Home Thoughts from Abroad, Home Thoughts from the Sea, Incidents of the French Camp, Hervé Riel, Pheidippides, The Last Duchess, Up at a Villa—Down in a City, The Italian in England, The Patriot, The Pied Piper, "De Gustibus" Instans Tyrannus; Arnold's Sohrab and Rustum, and The Forsaken Merman; Selections from American Poetry, with special attention to Poe, Lowell, Longfellow, and Whittier.

B. This part of the requirement is intended as a natural and logical continuation of the student's earlier reading, with greater stress laid upon form and style, the exact meaning of words and phrases, and the understanding of allusions. The books provided for study are arranged in five groups, from each of which one selection is to be made.

Group I—Drama

Shakespeare's Julius Cæsar, or Macbeth, or Hamlet.

Group II—Poetry

Milton's L'Allegro, Il Penseroso, and either Comus or Lycidas; Tennyson's The Coming of Arthur, The Holy Grail, and The Passing of Arthur; the selections from Wordsworth, Keats, and Shelley in Book IV of Palgrave's Golden Treasury (First Series).

Group III—Oratory

Burke's Speech on Conciliation with America; Macaulay's Two Speeches on Copyright, and Lincoln's Speech at Cooper Union; Washington's Farewell Address, and Webster's Faneuil Bunker Hill Oration.

Group IV—Essays

Carlyle's Essay on Burns, with a selection from Burns's Poems; Macaulay's Life of Johnson; Emerson's Essay on Manners.

Ancient History to the Coronation of Charlemagne with

special reference to the history of Greece and Rome. (Myer's Ancient History or Equivalent.)

Medieval and Modern History, a year's work based on a text-book, but including reference reading and note-book work. (Myer's Middle Ages and Myer's Modern Age or equivalent.)

English History, including text, reference and note-book work for one year (Andrews's History of England or equivalent.)

United States History and Civil Government. (Channing's Students' History and Ashley's Federal State or equivalent.)

Greek lessons and grammar.

Xenophon, four books of the Anabasis, and composition.

Homer, three books of the Iliad, with prosody; ability to read easy Greek at sight.

Latin lessons and grammar.

Cæsar, Commentaries (Books I-IV).

Cicero, seven orations, including those against Catiline and for the poet Archias, and the Manilian Law.

Virgil, six books of the Aeneid and prosody.

Grammar, composition and sight reading are required as a portion of each year's work.

Elementary French. One year of French; elements of grammar; ability to write at dictation and to translate from English; reading of about one hundred and fifty pages of text.

Intermediate French. Additional work in French, amounting to one year's advanced work in translation and composition.

Advanced French. The ability to read at sight any piece of modern prose or poetry and to write in French a paper on an assigned subject.

Elementary German. One year of German, elements of grammar; ability to write at dictation and to translate from English; reading of about one hundred and fifty pages of text.

Intermediate German. Additional work in German, amounting to one year's advanced work in translation and composition.

Advanced German. The ability to read at sight any piece of modern German prose of moderate difficulty and to write in German a paper on an assigned topic.

Spanish (1 or 2 units). Including an accurate knowledge of the essentials of grammar, ability to write ordinary Spanish and to read ordinary Spanish prose.

Elements of Algebra, with special attention to factoring and solution of equations, and including ratio and proportion.

Algebra ($\frac{1}{2}$ unit), being a continuation of the course in the elements of Algebra with special emphasis on algebraic theory.

Algebra ($\frac{1}{2}$ unit). Quadratics and indeterminate equations, irrational and imaginary numbers, ratio, proportion and variations, in review; also theory of exponents, progressions, undetermined co-efficients and logarithms.

Plane Geometry, with original exercises and problems in mensuration.

Solid Geometry ($\frac{1}{2}$ unit). With original exercises and problems.

Trigonometry ($\frac{1}{2}$ unit). Elementary course in plane trigonometry.

Physics, covering an elementary knowledge of dynamics, sound, light, heat, magnetism and electricity; recitation and laboratory work.

Chemistry, including classroom and laboratory work in the elements of chemistry as presented in modern standard text-books on the subject. At least five exercises a week for one year.

Physical Geography, covering the descriptive and explanatory study of the commoner phenomena of nature, including satisfactory laboratory and field work.

Botany, covering the morphology and simpler physiology of the higher plants, including some acquaintance with the local flora.

Zoology, emphasizing, in a general course, scientific methods and training rather than facts.

Extra Entrance Credits

If by examination or by certificate, a student presents more than fifteen units of commended work for admission he may, after the lapse of a semester and upon formal application, receive college credit for certain subjects, provided that these subjects, or others closely allied, have been continued in college with high grade, one unit of commended work being allowed three hours of college credit. Extra credit is thus allowed only in foreign language, advanced mathematics and advanced science. Credit, varying in amount with the individual courses, is granted for graduate work in approved high schools.

Requirements for Graduation

Bachelor of Arts Degree

The courses of study offered by the College lead to the degree of Bachelor of Arts.

These courses include certain required studies, but also a wide range of electives in language and literature, philosophy, economics, history, mathematics, science and fine arts.

Hour Requirements

One hundred and twenty-six hours of work are required for graduation. An "*hour*" consists of one recitation or lecture period, or one laboratory period a week for one semester. A recitation or lecture period covers fifty-five minutes; a laboratory period covers, in general, the time of three such periods. Six hours of the one hundred and twenty-six are in Physical Education. In order to complete the course in four years one must take an average of fifteen hours of academic work per semester throughout the four years.

Credit Requirements

In addition to the requirements of hours, as stated above, there is required for promotion from class to class and for graduation a certain number of "credits." Details regarding credits are published in the "Manual of Procedure.."

Graduation With Honors

In June, 1915, those students who have two hundred and twenty-two or more credits are graduated with the honor *cum laude*; those who have two hundred and eighty-two or more credits are graduated with the honor of *magna cum laude*; and those who have three hundred and ten or more credits are graduated with the honor *summa cum laude*.

Group Requirements

In the selection of his work the student is given a large range of choice. The only limitations are such as will insure to him, on the one hand, the breadth of view which may be gained by an introductory study of each of the great realms of knowledge; and, on the other, that concentration along some chosen line of work which shall develop power of thought and an actual fund of knowledge in some particular field. To this end the student will select a limited amount of work from each of certain groups. Some of these courses because of their value in mental training and as the basis for later work are placed in the Freshman and Sophomore years.

Further details concerning these courses may be found under "Departments of Instruction."

Subject Requirements

English Composition—4 hours, Freshman year.

English Literature—6 hours, Freshman or Sophomore year.

French or German—12 hours, Freshman and Sophomore years.

History—6 hours, Freshman or Sophomore year, except for those who enter with credit for three units of History.

Mathematics—6 hours, ordinarily Freshman year, except for those who enter with credit for three units of Mathe-

matics. Such may substitute a year of work in science for the required mathematics; but this may not be used to meet the requirement in science immediately following.

Physics, Chemistry, Zoology, Botany or Physiology—6 hours, Freshman or Sophomore year. A student who enters with only one unit of science must take 6 hours of another line of science and, in general, it is expected that one will take in college at least 6 hours in science in a different line from any presented for entrance.

Physical Education—4 hours in Freshman and Sophomore years and 2 hours in Junior and Senior years.

Literature, English or Foreign—6 hours, Junior or Senior year. This cannot be met by a first-year course in language.

Economics—6 hours, usually Sophomore or Junior year.

Philosophy and Psychology—6 hours, Sophomore or Junior year.

In addition to these requirements, there is a general requirement of 36 hours of C and D work of which at least 9 must be D work.

Students who have shown special ability in one line of work may, with the consent of the head of the department, enroll for a departmental major. This major includes, usually, at least 18 hours in the department chosen, together with certain courses in allied subjects, and usually a reading knowledge of French and German. The student plans his work in consultation with the head of the department as well as with his class adviser. Certain prerequisites, differing with the subject chosen, are indicated for each major. A final examination or thesis or both may be required.

Students who desire to become candidates for a departmental major should indicate such intention as early as possible, and must be registered as candidates for such departmental major not later than the first week of registration in their Senior year.

The student who completes a departmental major receives in addition to his diploma, the special commendation of the department.

Curriculum

An *outline* of the work which leads to graduation is here given by years. Following this scheme is a *list* of the definite courses from which the work may be chosen. A more complete *description* of each course may be found under "Departments of Instruction."

Each "*hour*" represents one recitation or laboratory period per week for one semester.

Freshman Year

32 to 36 hours

Hygiene	2	hours
Physical Education	2	hours
English Composition	4	hours
French or German	6	hours
History ¹ or English Literature ² , or Greek, or Latin.....	6	hours
Mathematics ⁶	6	hours
Elective from the above or from Art, Bible, Biology, Chemistry, Engineering, English, Music or Physics.	6	hours

Sophomore Year

32 to 36 hours

Physical Education	2	hour
French or German ³	6	hour
English Literature ² or History ¹	6	hour
Physics, Chemistry, Botany, Physiology or Zoology ⁴	6	hour
Elective from the above or from Art, Bible, Engineer- ing, Economics and Sociology ⁵ , Mathematics, Music, Psychology and Philosophy ⁵ or Spanish.....	12	hour

¹Must be taken in Freshman or Sophomore year, unless 3 units of History have been accepted for entrance.

²Must be taken in Freshman or Sophomore year.

³Must continue any language begun in Freshman year.

⁴Unless the Science requirement was met Freshman year.

⁵Since 6 hours each of Economics and Sociology, and of Psychology and Philosophy must be taken during the course, it is recommended that one of these subjects be elected in Sophomore year.

⁶A science may be substituted, if 3 units of Mathematics have been presented for entrance, but this may not be counted as fulfilling the general science requirement.

Junior and Senior Years

Physical Education	2 hours
Economics and Sociology ¹	6 hours
Philosophy and Psychology ¹	6 hours
Literature ²	6 hours
Elective ³	42 hours

¹Unless already taken.

²Not including a first-year course in language.

³At least 9 hours being in D courses, and not over 6 in B courses.

List of Courses¹

Open to Freshmen (and Sophomores)

- Art A1 and A2, Elementary Course (6).
 Biblical Literature A1 and A2, Contents of the Bible (2).
 Biology A1-A2, General Biology (6).
 Chemistry A1, Elements of Chemistry (4).
 A2, Inorganic Chemistry (3).
 B3 and B4, General Inorganic; Inorganic Preparations (5).
 B5 and B6, Qualitative Analysis (4).
 Engineering A1 and A2, Graphics (4).
 English A1 and A2, American Literature (6).
 A21 and A22, Composition (4).
 A35 and A36, Elementary Public Address (4).
 B3 and B4, History of English Literature (6).
 B3a, Mediaeval Literature (3).
 French A1-A2, Elementary Course; Modern Prose and Drama (6).
 B3-C4, Nineteenth Century Novel (6).
 B3' and C4', Composition (4).
 German A1 and A2, Elementary Course (6).
 B1' and B2', Composition (2).
 B3, Prose Narrative and Drama (3).
 B4, Schiller (3).
 B3' and B4', More Advanced Composition (2).
 C19 and C20, Advanced German Prose (6).
 Greek A1 and A2, Elementary Greek (6).
 B3-B4, Lysias; Plato (6).
 B3' and B4', Composition (2).
 History A7-A8, English History (6).
 A13 and A14, Ancient Classical (6).

¹Courses connected by a dash may be taken separately; those connected by "and" are to be taken consecutively.

*Courses starred are not given in 1915-1916.

- Latin A1 and A2, Elementary Latin (6).
 A3 and A4, Vergil; Cicero (6).
 B5-B6, Cicero and Livy; Horace (6).
 B5' and B6', Composition (2).
 Mathematics A1-A2, Solid Geometry; Plane Trigonometry (6).
 A3 and B4, Algebra (6).
 A5 and A6, Elementary Analysis (6).
 A9-A10, Algebra; Trigonometry (6).
 B7-B8, Analytic Geometry and Calculus (8).
 B7a-B8a, Analytic Geometry; Calculus (6).
 Music A1 and A2, Elementary Course (4).
 Physical Education A1 and A2, Gymnastics (2).
 A11 and A12, Gymnasium Practice (2).
 Physics B1-B2, Mechanics and Sound; Heat, Magnetism
 Electricity and Light (8).
 Physiology A1 and A2, Applied Physiology and Hygiene (2).
 B19 and B20, Folk and National Dances (2).

List of Courses

Open to Sophomores (and Upperclassmen)

- All B courses listed above and such A courses as are permitted by classification adviser.
- Art B3-B4, Still Life, Perspective, Composition (6).
 Biblical Literature B3 and B4, Preservation and Transmission of the Bible (2).
 B21 and B22, Ancient Oriental History and Literature (6).
 Botany B21-B22, General Botany (6).
 Chemistry C7 and C8, Elementary Quantitative Analysis (6).
 C9 and C10, Organic Chemistry (6).
 Economics B1 and B2, Introduction to Economics (6).
 B21 and B22, Elements of Sociology (6).
 Engineering B3 and B4, Graphics (4).
 C11 and C12, Surveying (6).
 English B3 and B4, History of English Literature (6).
 B3a, Mediaeval Literature (3).
 B23, Composition (3).
 B24a and B24b, Composition (4).
 B31, Argumentation (3).
 B32, Public Address (3).
 German C9-C10, Nineteenth Century Novel (6).
 C9' and C10', Composition and Conversation (2).

- Greek B13 and B14, Greek Literature and Life (6).
 C5-C6, Aeschylus and Sophocles; Demosthenes (6).
 History B1-B2, Mediaeval; the Renaissance and Reformation (6).
 Latin C7-C8, Pliny; Plautus (6).
 C7' and C8', More Advanced Composition (2).
 Mathematics B13-B14, Analytic Geometry and Calculus (6).
 C15-C16, Descriptive Geometry and Perspective (6).
 C17 and C18, Advanced Analytic Geometry and Calculus (6).
 Music B3 and B4, History and Appreciation (6).
 B5 and B6, Harmony (6).
 Philosophy B21-B23 or B24, Logic and Ethics (6).
 Physical Education B3 and B4, Gymnastics (2).
 B13 and B14, Gymnasium Practice (2).
 B19 and B20, Folk and National Dances (2).
 Physics C3-D4, Mechanics of Solids and Fluids, and Heat (6).
 Physiology B3 and B4, Anatomy and Physiology (6).
 Psychology B1-B2, Elements of Psychology (6).
 B3 and C4, Principles of Psychology (6).
 Spanish B21-B22, Elementary Course; Modern Prose and Drama (6).
 Zoology B11-B12, General Zoology; Vertebrate Morphology (6).
 B18, Entomology (3).
 C31-C32, Systematic Vertebrate Zoology (6).
 C34, Cytology and Comparative Embryology (3).

List of Courses

(In addition to above courses)

Open to Seniors and Juniors

- Art B11-B12, History of Art (6).
 C5-C6, Anatomy; Drawing from Life (6).
 C9 and C10, Art Appreciation (2).
 D7-D8, Figure from Life in Charcoal; Head from Life in Oil (6).
 Astronomy B1 and B2, General Astronomy (6).
 C3-D4, Descriptive; Theoretical and Practical (6).
 D6, Astrophysics (3).
 C7 and C8, Astronomical Seminar (2).

Biblical Literature C5-C6, Old Testament Introduction; New Testament Introduction (2).

C7 and C8, The Teachings of Jesus (2).

C23-C24, Hebrew History and Jewish and Early Christian History and Literature (6).

D25-D26, History of Religions; History of Christianity (6).

C31-C32, Hebrew Grammar; Hebrew Readings (6).

C33-D42, Poetry of the Bible; Semitic Institutions and Culture (6).

Botany C23, Physiology (3).

C24, Sub-tropical Horticulture (2).

C25-D26, Mycology; Pathology (6).

D27-D28, Phaenogamic Botany (6).

C30, Plant Propagation (3).

D31 and D32, Special Mycology (6).

Chemistry C7 and C8, Elementary Quantitative Analysis (6).

C9 and C10, Organic Chemistry (6).

C15 and C16, Agricultural Chemistry (6).

D11 and D12, Mineral Chemistry (6).

D13, Organic Preparations (3).

D17, Advanced Quantitative Analysis (3).

D18, Advanced Quantitative Analysis (3).

D19 and D20, Special Advanced Chemistry (2).

D21 and D22, Physical Chemistry (6).

Constitutional History D9 and D10, Comparative Constitutional History (6).*

D11 and D12, American Constitutional History (6).

Economics and Sociology B3, Principles of Economics (3).

C5-C6, Money and Banking; Public Finance (6).

D7-C8, Corporation Economics; Problems of Labor (6).

D10, Transportation (3).

D19 and D20, Applied Sociology (2).

C25-C26, Poor Relief; Criminology (6).

D27-C28, Theories of Social Reform; City Problems (6).

D30, Immigration (3).

Engineering D13 and D14, Applied Mechanics (6).

English D5-D6, Shakespeare and Early Contemporaries; Shakespeare and Later Contemporaries (6).

C7-C8, Essayists from Bacon to Arnold; English Novel (6).*

C9-C10, British Poets; British Poets of the Victorian Period (6).

D12, History of the English Drama to 1462 (3).

- C25-C26, Journalism; Essay (6).
 D27-C28, Literary Criticism; the Short Story (6).
 C33, Advanced Argumentation (3).
 C34a and C34b, Practical Public Speaking (4).
 C41-D42, Anglo-Saxon; Beowulf (6).
 D44, Chaucer (3).
 C19, English Poetry of Victorian Age (3).
 D20, Present Day English Poetry (3).
 French D5-D6, Classic Drama; Prose of the Seventeenth Century (6).
 D7-D8, Literature of the Eighteenth Century; Romantic School (6).
 D7' and D8', Conversation and Advanced Composition (4).
 Geology B1 and B2, Geology (6).
 German C9 and C10, Novel of the Nineteenth Century (6).
 C9' and C10', Composition and Conversation (2).
 D5-D6, Lessing, Goethe (6).
 D7-D8, History of German Literature to Lessing; from Lessing to Goethe (6).
 D11-D12, Scientific German; Composition (6).
 Greek C7-D8, Hellenistic Greek; Homer (6).
 D9-D10, Plato; Thucydides (6).
 D11 and D12, Composition and Sight Reading (2).
 History C3-D4, Europe in the Eighteenth Century; Europe in the Nineteenth Century (6).
 D5 and D6, American Social and Political History (6).
 C15-D16, Modern Asiatic History; History of Spanish America (6).
 Italian B31-B32, Elementary (6).
 C33-D34, Classics (6).
 Latin D9-D10, Cicero; Catullus, Lucretius, Tibullus, Propertius, Ovid and Lucan (6).
 D11-D12, Tacitus; Vergil (6).
 D13 and D14, Composition (2).
 Law B1 and B2, Elementary Law; Contracts (6).
 C3 and C4, Elementary Law, Pleading, Evidence (6).
 C17 and D18, American Diplomacy and International Law (6).
 Mathematics C17 and C18, Advanced Analytic Geometry and Calculus (6).
 C19, Differential and Integral Calculus (3).
 D20, Theory of Equations (3).
 D21 and D22, Higher Analysis (6).

- D24, Differential Equations (3).
 D25 and D26, Analytic Mechanics (6).
 D27 and D28, Projective Geometry (6).
 Music C7 and C8, Composition I (6).
 D9 and D10, Composition II (6).
 C11 and B12, Form (6).
 Philosophy C25-C26, Ancient and Mediaeval Philosophy
 Modern Philosophy (6).
 D27-D28, Introduction to Philosophy; Metaphysics
 (6).
 C32, Principles of Ethics (3).
 D29-D30, Philosophy of Religions; Modern Philosophical Problems (6).
 Physical Education C5 and C6, Sports (1).
 C15 and C16, Sports (1).
 C7 and C8, Sports (1).
 C17 and C18, Sports (1).
 C21 and C22, Folk and National Dances (1).
 C23 and C24, Aesthetic Dances (1).
 C25 and C26, Gymnasium Practice (1).
 Physics C3-D4, Mechanics of Solids; Mechanics of Fluids and Heats (6).
 C5-D6, Sound and Light; Magnetism and Electricity (6).
 C9 and C10, Physical Measurements (6).
 Physiology D5-D6, Histology; Embryology (6).
 B11 and B12, Public Hygiene.
 B13 and B14, Problems of Heredity and Eugenics.
 Psychology C6, Advanced Psychology (3).
 C7-D8, Educational Psychology; History of Education (6).
 Spanish C23-C24, Contemporary Spanish Novel (6).
 C23' and C24', Commercial Correspondence (2).
 D25-D26, Classic Drama; Prose of the Sixteenth and Seventeenth Centuries (6).
 Zoology C31-C32, Systematic Invertebrate Zoology; Systematic Vertebrate Zoology (6).
 D13-D14, Advanced Zoology; Bionomics (6).
 D15 or D16, Advanced Zoology (3).
 D19 and D20, Special Entomology (6).
 D33-C34, Comparative Neurology, Cytology and Comparative Embryology (6).

Advanced Work

While the College directs its attention primarily to undergraduate work it also desires to extend its opportunities to students seeking the earlier stages of graduate work whenever it can do so without sacrificing the interests of undergraduates. Only those are admitted who give promise of contributing a definite and inspiring influence to the life of the college. Such residence is therefore required as is deemed necessary to insure mutually helpful relations.

Master's Degree

In a few departments, where the facilities of the College warrant, limited numbers of students, whose undergraduate records show excellence of marked character, are accepted as graduate students in line for the Master's degree. Twenty hours of graduate work, consisting of a major in one department and a minor in the same, or a closely allied department, together with a satisfactory thesis, are required. Details as to prerequisites and courses offered may be secured from Professor James A. Lyman, Chairman of the Committee on Graduate Work.

Music Certificate

The College gives a *Certificate of Proficiency in Music* on the completion of a satisfactory course in this department. In order to secure this certificate a student must show marked proficiency in a music major and general knowledge in a music minor; work in Piano being required in all cases. Proficiency in the major involves ability to perform creditably and alone an entire program. This course includes, besides the usual musical studies, certain courses in language, history, literature and philosophy.

Departments of Instruction

Order of Arrangement

The announcements of the Departments of Instruction arranged in three divisions:

- I. Language, Literature and Fine Arts*
- II. Mathematics, Physical and Biological Sciences*
- III. History, Social Sciences and Philosophy*

Designation of Courses

The letter preceding the number in the designation of a course indicates in general its grade. Elementary courses designated by A (as Greek A1) are given in Freshman or Sophomore year; B courses are either those which follow the A courses of earlier years or the more advanced beginning courses; C and D courses are advanced courses given to Juniors and Seniors, D courses being the more difficult. The natural sequence of courses is from A to B, B to C, and C to D, and a student may not enter a C or D course without previous work in the same line.

To pass from an A course to a C course or from a B course to a D course requires a grade of A in the more elementary course.

Seniors may elect an A course only by permission of the Classification Committee, and with a prescribed discount in hours.

I. Language, Literature and Fine Arts

Classical Languages and Literatures

GREEK

A1 and A2. ELEMENTARY GREEK. (3 hours each.)
A course designed for those wishing to begin the study of the Greek language after entering college. Grammar, composition, and

ding from the Anabasis of Xenophon, make it possible those who complete the course with high grade to elect Greek B3 and B4 in their second year. Freshman and Sophomore years, both semesters. (May not be given in 1915-16.)

B3. LYSIAS. (3 hours.) Selected orations (Morgan), with review of grammar and study of Greek life. Freshman and Sophomore years, first semester. M, at 9:30; W, at 3:00. Assistant Professor Robbins.

B4. PLATO. (3 hours.) Apology and Crito with selections from Phaedo (Kitchel). Homer, Odyssey, three or four books; grammar. Freshman and Sophomore years, second semester. M, at 9:30; W, F, at 3:00. Assistant Professor Robbins.

B3' and B4'. GREEK COMPOSITION. (1 hour each.) Required of those who make Greek their major. Freshman and Sophomore years, both semesters. (Hours to be arranged.)

C1. AESCHYLUS AND SOPHOCLES. (3 hours.) Prometheus (Barry) and Oedipus the King (White.) Translations of their tragedies read in class; study of Haigh's Greek Theatres; essays. Sophomore year, first semester. (Not given in 1915-1916.)

C6. DEMOSTHENES. (3 hours.) Oration on the Crown (Mumfrees); outline of Greek literature; sight reading. Sophomore year, second semester. (Not given in 1915-1916.)

C7. HELLENISTIC GREEK. (3 hours.) One of the Gospels and one of the Pauline Epistles; informal lectures on ancient manuscripts and the elements of textual criticism. Alternates with Greek C9. Junior and Senior years, first semester. (Not given in 1915-1916.)

D8. HOMER. (3 hours.) Rapid reading of a number of books of the Iliad or Odyssey; the Homeric question. Alternates with Greek D10. Junior and Senior years, second semester. (Not given in 1915-1916.)

D9. PLATO, PHAEDO AND PROTAGORAS. (3 hours.) Outline of Greek Philosophy. Alternates with Greek C7. Junior and Senior years, first semester. (Not given in 1915-1916.)

D10. THUCYDIDES. BOOKS VI AND VII. (3 hours.)
ternates with Greek D8. Junior and Senior years, second semester. (Not given in 1915-1916.)

D11 and D12. PROSE COMPOSITION AND SIGHT READING. (1 hour each.) Required of all making Greek a major. Junior and Senior years, both semesters. (Not given in 1915-1916.)

B13 and B14. GREEK LITERATURE AND LIFE. (3 hours each.) This course is open to those who have no knowledge of the Greek language. It is intended to give, through lectures and translations, some appreciation of the Greek genius and spirit, and some knowledge of the form and content of Greek literature. Though ordinarily a year course, it may, by special arrangement with the instructor, be taken for either semester. Sophomore and Junior years, both semesters. (Not given in 1915-1916.)

LATIN

A1 and A2. ELEMENTARY LATIN. (3 hours each.) This course intended for those desiring to begin the study of the Latin language after entering college. Grammar, composition, and readings from Caesar's Gallic War. Freshman year, both semesters. M, at 8:30; W, F, at 2:00. Professor Colcord.

A3 and A4. VERGIL AND CICERO. (3 hours each.) Selections from the Aeneid and the Orations of Cicero. Freshman and Sophomore years, both semesters. M, at 9:30; W, F, at 3:00. Professor Colcord.

B5. CICERO AND LIVY. (3 hours.) Cicero; (Kelsey) Senectute and De Amicitia; Livy; (Westcott) Books X and XXII, selections; written translations, collateral reading, sight reading. Freshman year, first semester. T, Th, S, at 9:30. Professor Colcord.

B6. HORACE. (3 hours.) (Bennett) Odes, Epodes, Carmen Saeculare; Horatian meters; written translations, collateral reading, sight reading. Freshman year, second semester. T, Th, S, at 9:30. Professor Colcord.

B5' and B6'. LATIN COMPOSITION. (1 hour each.) Required of all making Latin their major. Freshman year, both semesters. W, at 11:15. Professor Colcord.

C7. PLINY. (3 hours.) (Westcott) Letters. Tacitus, Suetonius, Claudian, Agricola and Germania. Collateral readings, history of Roman satire. Sophomore year, first semester. M, at 1:00; W, F, at 7:30. Professor Colcord.

C8. PLAUTUS. (3 hours.) Captivi, Trinummus. Terence. Adelphoi, Andria. Collateral readings, study of early Roman comedy and fragments of early Latin. Sophomore year, second semester. M, at 1:00; W, F, at 7:30. Professor Colcord.

C7' and C8'. LATIN COMPOSITION. (1 hour each.) Continued narrative. Required of all making Latin their major. Prerequisites: Latin B5' and B6'. Sophomore year, both semesters. Hours to be arranged with the instructor. Professor Colcord.

D9. CICERO. (3 hours.) Letters, Tusculan Disputations. Roman satire; Persius, Martial and Juvenal, selections. History of Roman satire. Junior and Senior years, first semester. (Not given in 1915-1916.) Professor Colcord.

D10. CATULLUS; LUCRETIUS; TIBULLUS; PROPERTIUS; SILETIUS; LUCAN (Crowell.) (3 hours.) Selections. Topics in outline of Roman literature. Junior and Senior years, second semester. (Not given in 1915-1916.) Professor Colcord.

D11. TACITUS. (3 hours.) Histories and Annals. Junior and Senior years, first semester. M, at 3:00; W, F, at 9:30. Professor Colcord.

D12. VERGIL. (3 hours.) Bucolics and Aeneid, Books I-XII. Ovid. Selections. Christian and Latin Hymns. Junior and Senior years, second semester. M, at 3:00; W, F, at 9:30. Professor Colcord.

D13 and D14. LATIN COMPOSITION. (1 hour each.) Original papers. Required of those making Latin their major. Prerequisites: Latin C7' and C8'. Junior and Senior years, both semesters. Hours to be arranged with the instructor. Professor Colcord.

Biblical Literature

GENERAL BIBLE STUDY

A1 and A2. CONTENTS OF THE BIBLE. (1 hour each.) The purpose is to make the student acquainted with the contents of the English Bible. The material, style and purpose of the various facts will be discussed. Freshman year, both semesters. W, at 1:00. Professor Colcord.

B3 and B4. THE PRESERVATION AND TRANSMISSION OF THE BIBLE. (1 hour each.) A general study of the manuscripts, versions and other authorities, together with the history of biblical translations. Sophomore year, both semesters. W, at 3:00.

C5. OLD TESTAMENT INTRODUCTION. Historical and Literary Study of the Old Testament. (1 hour.) Lecturer reading selected portions of the Old Testament narrative and the reading of a brief volume of Old Testament Introduction. Junior year, first semester. F, at 2:00. Professor Parker.

C6. NEW TESTAMENT INTRODUCTION. (1 hour.) An introduction to the historical study of the New Testament writings, purposing to give briefly the theories of origin of the various books and of the formation of the collection called "The New Testament." Junior year, second semester. F, at 2:00. Mr. Marriott.

C7 and C8. THE TEACHINGS OF JESUS. (1 hour each.) The sources of our knowledge of the life of Jesus, the critical problems involved in a study of these sources, and a systematic study of the life and teachings of Jesus in the light of his own day and ours. Lectures and text-books. Open to Seniors and to Juniors, with permission of instructor. Both semesters. F, at 1:00.

BIBLICAL HISTORY AND LITERATURE

B21 and B22. ANCIENT ORIENTAL HISTORY AND LITERATURE. (3 hours each.) The beginnings of the earliest civilization, and its development in the lands of the Bible.

environment, including Babylonia, Assyria, Egypt, Persia and Palestine. A background for a comprehensive study of Political History and Literature. Sophomore year, both semesters. M, at 2:00; W, F, at 8:30 Professor Stearns.

C23. HEBREW HISTORY AND LITERATURE. (3 hours.) From early Semitic times: in history, to the capture of Jerusalem by Titus; in literature, to the completion of the Old Testament canon. Junior and Senior years, first semester. (Not given in 1915-1916.) Professor Stearns.

C24. EARLY CHRISTIAN HISTORY AND LITERATURE. (3 hours.) The development during the first four centuries. Junior and Senior years, second semester. (Not given in 1915-1916.) Professor Stearns.

C28. CHRISTIAN MISSIONS. (3 hours.) History of efforts to extend the use of Biblical literature and belief, with special attention to modern missionary movements. Junior and Senior years, second semester. M, at 3:00; W, F, at 8:30. Professor Stearns.

D25. HISTORY OF RELIGIONS. (3 hours.) Development of the great religious systems of the world, with such ethical analysis as may be necessary for comparisons with Biblical values. The object is to widen historical information, and to emphasize the place the Bible holds in religion. Junior and Senior years, first semester. M, at 3:00, W, F, at 9:30. Professor Stearns.

D26. HISTORY OF CHRISTIANITY. (3 hours.) The historical development of Christianity into a world religion. Lecture course with required readings. Junior and Senior years, second semester. (Not given in 1915-1916.) Professor Stearns.

C31. HEBREW GRAMMAR. (3 hours.) A course for beginners. Exercises in reading and writing Hebrew. Prerequisite: A B course in either Greek, Latin or German. Junior and Senior years, first semester. To be given if elected by a sufficient number. Hours to be arranged with the instructor. Professor Stearns.

C32. HEBREW READINGS. (3 hours.) Translations representative selections from Old Testament Literature, enable the student to read the Hebrew Bible intelligently. Prerequisite: Biblical Literature, C31. Junior and Senior years, second semester. Hours to be arranged with instructor. Professor Stearns.

C33. THE POETRY OF THE BIBLE. (3 hours.) W, special study of portions of Isaiah, The Psalms, and Job. Junior and Senior years, first semester. M, at 3:00; W, at 9:30. Professor Stearns.

D42. SEMITIC INSTITUTIONS AND CULTURE. (3 hours.) Specialized studies in Semitic customs, arts and letters more or less connected with Old Testament history. Prerequisite: B22 or C23. Junior and Senior years, second semester. M, at 3:00; W, F, at 9:30. Professor Stearns.

Only one of the year courses D25 and C28, C31 and C33 and D42, will be given in 1915-1916.

English

ENGLISH LANGUAGE AND RHETORIC

Students who elect the English language as a major are required to offer English C41, D42 and D44; and, from the Department of English Literature, English B3a and B3b. Advice as to other work should be sought from the head of the Department. Students will be admitted to C and D courses in this Department who have done satisfactory work in B and C courses in the Department of English Literature.

A21 and A22. COMPOSITION. (2 hours each.) A study of the elements of effective prose composition. Lectures and analysis of illustrative specimens selected from masters of prose style to assist the student in securing a knowledge of the principles of good writing. These principles applied constantly in theme writing. Individual conferences with the instructor. Credit for English A21 is allowed only on the completion of English A22. Students deficient in English A21 and A22 may be required to take English B24. F

red in all courses; Freshman year, six divisions, two hours week, both semesters. I. W, F, at 7:30; II. Th, S, at 7:30; . Th, S, at 9:30; IV. M, W, at 11:15; V. T, Th, at 11:15; . W, F, at 1:00. Professor Frampton, Assistant Profes-
Brown, Mr. Edwards.

A35 and A36. ELEMENTARY PUBLIC ADDRESS. (2 hours each.) An elementary course designed to acquaint the student with his own needs. Frequent practice given in simple reading, declamation, and extempore speaking. The aim is to make the voice and body responsive to thought and feeling. Individual deficiencies pointed out, and modes of correction prescribed. Freshman year, both semesters. M, at 3:00; W, at 2:00. Mr. Edwards.

B23. COMPOSITION. (3 hours.) Introductory study of the short-story, the essay, and literary criticism. Special attention given to style. Frequent original work. Conferences. Open only to those who have made a B grade or better in English A21 and A22. Sophomore year, first semester. M, at 3:00; W, F, at 9:30. Professor Frampton.

B24a and B24b. COMPOSITION. (2 hours each semester.) A course in continuation of English A21 and A22. For those who need further study of composition. May be required of any students deficient in English. Sophomore year, both semesters. T, Th, at 11:15. Professor Frampton.

C25. JOURNALISM. (3 hours.) A study of the forms and methods of newspaper writing. Special consideration of reporting, the news story, the special article, the editorial, newspaper style, editing. Junior and Senior years, first semester. (May not be given in 1915-1916.) Assistant Professor Ament.

C26. ESSAY. (3 hours.) Analytical and constructive study of the essay; frequent original work. Special attention to form and clearness of expression. Open to Sophomores who attain an A grade in English B23. Junior and Senior years, second semester. (Not given in 1915-1916.) Assistant Professor Ament.

D27. LITERARY CRITICISM. (3 hours.) A study of the practice of literary criticism in the nineteenth century for the purpose of formulating a thorough critical background for the study of literature. The theories and tenets of various schools are studied and their bearings pointed out. Lectures. Frequent practice in critical writing. Junior and Senior years, first semester. M, at 8:30; W, F, at 2:00. Professor Frampton.

C28. THE SHORT-STORY. (3 hours.) A study of the form and technic of the short-story. Study of American short-story writers. Frequent original work. Open to Sophomores who have had English B23. Junior and Senior years, second semester. M, at 3:00; W, F, at 9:30. Professor Frampton.

B31. ARGUMENTATION. (3 hours.) A study of the elements of argumentation, the analysis of propositions and evidence and drawing of briefs. Practice debates. Sophomore year, first semester. T, Th, S, at 8:30. Mr. Edwards.

B32. PUBLIC ADDRESS. (3 hours.) A study of the forms of public address. The ends of speech such as clearness of action, and belief are taken up to determine selection of material and method of presentation. The aim is to give the student reasonable control of himself before an audience while effectively presenting clear and convincing thoughts. Lectures. Frequent speaking before the class. Prerequisite to English C34. Sophomore year, second semester. T, S, at 8:30. Mr. Edwards.

C33. ADVANCED ARGUMENTATION. (3 hours.) A study of the principles of argumentation, the tests of evidence, bringing and the structure of the forensic. Of especial value to those looking forward to the law as a profession. (May be given in 1915-1916.) Junior and Senior years, second semester. M, at 8:30; W, F, at 2:00. Professor Frampton.

C34a and C34b. PRACTICAL PUBLIC SPEAKING. (2 hours each.) The extempore method is used to train in the rapid formulation of thought and its attractive and effective

presentation. Current topics and questions of general interest are assigned in advance as material for the class discussion, but the choice of language is left largely to the student of speaking. Other topics are assigned at the time of speaking. Prerequisite: English B32. Junior and Senior years, both semesters. W, F, at 11:15. Mr. Edwards.

C41. ANGLO-SAXON. (3 hours.) A study of Anglo-Saxon grammar and the selections in Bright's "Reader." Required of students whose major is English. Given in alternate years. Junior and Senior years, first semester. (Not given 1915-1916.) Professor Frampton.

D42. BEOWULF. (3 hours.) A study of the text of Beowulf and of Anglo-Saxon versification. Lectures. Required of those whose major is the English language. Prerequisite: English C41. Given in alternate years. Junior and Senior years, second semester. (Not given in 1915-1916.) Professor Frampton.

D44. CHAUCER. (3 hours.) A linguistic and literary study of Chaucer. Lectures. Thesis. It is desirable, though not necessary, that those who elect this course shall have had English C41 and English B3a. Given in alternate years. Required of those whose major is the English language. Junior and Senior years, second semester. T, Th, S, at 8:30. Professor Frampton.

ENGLISH LITERATURE

Courses in English Literature A1 and A2 are provided for Freshmen who enter with less than four years of preparatory literature. Freshmen with credits in English history and with four years of preparatory literature, may register for courses B3, B3a and B4.

A1 and A2. NINETEENTH CENTURY ENGLISH AND AMERICAN LITERATURE. (3 hours each.) Characteristic literary forms and writers of the century. Special attention to those whose productions reappearing in other departments, as

history, oratory, and argument. Intensive study of selected masterpieces. Freshman year, both semesters. T, Th, S, at 8:30, or T, Th, S, at 9:30. Professor Stearns.

B3 and B4. HISTORY OF ENGLISH LITERATURE.. (3 hours each.) Historical backgrounds, material and development of English literature from its beginning to end of eighteenth century. Lectures, class discussions, and individual papers. Prerequisite: English history and four years of English literature. Sophomore and Freshman years, both semesters. T, Th, S, at 8:30, or T, Th, S, at 11:15. Professor Spalding.

B3a. MEDIAEVAL LITERATURE. (3 hours.) A course in comparative literature in translation with special attention to the relations between England and the continent. May be taken instead of English B3 to meet the literature requirement. Required of those who major in the English language, as prerequisite to English D44. Open to those who have a knowledge of English history. Sophomore year, first semester. T, Th, S, at 8:30. Professor Frampton.

B13 and B14. GREEK LITERATURE AND LIFE. (3 hours each.) The same as Greek B13 and B14. In exceptional cases this course may be substituted for B3 or B3a and B4. (Not given in 1915-1916.) Professor Norton.

Two semester-courses provided in Shakespeare, arranged in logical sequence. Either course may be taken without the other. Both courses required for those whose major is English literature.

D5. SHAKESPEARE'S COMEDIES AND CHRONICLE PLAYS. (6 hours.) Lectures upon Shakespeare's relation to historical and dramatic influences of the Elizabethan period. Study from each group of selected plays distinctive of Shakespeare's early material and development. Prerequisite: English B3 or B3a, and B4. Junior and Senior years, first semester. M, at 2:00; W, F, at 8:30. Professor Spalding.

D6. SHAKESPEARE'S TRAGEDIES AND ROMANCES. (3 hours.) Lectures upon Shakespeare's mature genius and dramatic

Analytical and interpretative study of representative mas from each group. Prerequisite: English B3 or B3a B4. Junior and Senior years, second semester. M, at 0; W, F, at 8:30. Professor Spalding.

12. HISTORY OF THE ENGLISH DRAMA TO 1462. (3 rs.) A study of the development of the English drama n its beginning to the closing of the theatres by the itans. Attention is given chiefly to the immediate prede- sors, contemporaries and successors of Shakespeare. Jun- and Senior years, second semester. M, at 8:30; W, F, at 0. (May not be given in 1915-1916.) Professor Frampton. ne course in English prose, either C7 or C8, is required all whose major is English literature.

7. ENGLISH ESSAYISTS FROM BACON TO ARNOLD. (3 rs.) Historical development with analytical and interp- ative study of selected essays. Junior and Senior years, t semester. (Not given in 1915-1916.) Assistant Pro- sor Ament.

8. ENGLISH NOVEL. (3 hours.) Careful reading of lve to fifteen classic novels, with interpretative and crit- study of a few. This course presupposes a fair acquaint- ce with Victorian fiction. Junior and Senior years, sec- semester. (Not given in 1915-1916.) Assistant Pro- sor Ament.

Two courses in English poetry, one of which shall be C9, required of those whose major is English literature. der exceptional conditions C10 or C19 may be given as courses.

9. ENGLISH POETRY FROM MILTON TO POPE; POETICS. (3 hours.) Lectures upon the scientific and artistic struc- e of English verse. Survey of Jacobean and Queen Anne iods. Intensive study of Milton and Pope. Prerequisite: English B3 or B3a and B4. Junior and Senior years, alter- e years, first semester. T, Th, S, at 9:30. Professor alding.

C10. ENGLISH POETRY FROM BURNS TO WORDSWORTH. (3 hours.) Lectures upon development of Romanticism. Survey of periods from death of Pope to appearance of Tennyson. Special study of Wordsworth, Shelley, and Keats. Prerequisite: English B3 or B3a and B4. Junior and Senior years, alternate years, second semester. T, Th, S, at 9:30. Professor Spalding.

C19. ENGLISH POETRY OF VICTORIAN AGE. (3 hours.) Poetical trend and achievements of the century. Special study of Browning and Tennyson. Junior and Senior years, alternate years, first semester. (Not given in 1915-1916.) Professor Spalding.

D20. PRESENT-DAY ENGLISH POETRY. (3 hours.) Senior study of recent poets most sensibly shaping and pressing contemporary poetical philosophy and usage. Open only to students who, with other prerequisites, have taken at least two courses in English poetry. Senior year, alternate years, second semester. (Not given in 1915-1916.) Professor Spalding.

Germanic Languages and Literatures

GERMAN

A1 and A2. ELEMENTARY COURSE. (3 hours each.) Intended especially for Freshmen who offer no modern language. By the constant use of the language in the classroom the student is stimulated from the outset to think in German. Thorough drill in grammar and composition throughout the year; memorizing of poetic and also prose selections; reading of a considerable body of simpler stories and poems. Freshman year, both semesters. M, at 3:30; W, F, at 9:30. Assistant Professor Matlock.

B3. PROSE NARRATIVE AND DRAMA. (3 hours.) Reading of more advanced short stories or a novel, and a dramatic work. Grammatical analysis, short essays in German on assigned topics, sight reading, discussion of text in German, the

t being expected to grow in ability to use the language fully. Prerequisites: German A1 and A2 or two years elementary German. Freshman and Sophomore years, three divisions, first semester. I. M, at 1:00; W, F, at 7:30. II. M, at 2:00; W, F, at 8:30. III. M, at 8:30, W, F, at 2:00. Professor Bissell and Assistant Professor Matlock.

14. SCHILLER. (3 hours.) Reading of selected ballads and other poems of Schiller, *Lied von der Glocke*, and *Maria Stuart*. Prerequisite: German B3. Freshman and Sophomore years, three divisions, second semester. I. M, at 1:00; W, F, at 7:30. II. M, at 2:00; W, F, at 8:30. III. M, at 8:30; W, F, at 2:00. Professor Bissell and Assistant Professor Matlock.

15. B1' and B2'. GERMAN COMPOSITION. (1 hour each.) Simple prose narrative and conversation. Review of fundamentals of grammar. May be required of those deficient in German. Freshman and Sophomore years, both semesters. T, Th, at 11:15. Associate Professor Churchill.

16. B3' and B4'. GERMAN COMPOSITION. (1 hour each.) Advanced narrative prose, based on Wiehr's *Composition*. For students of good standing. Freshman and Sophomore years, both semesters. Th, at 11:15. Associate Professor Churchill.

17. GERMAN NOVEL OF THE NINETEENTH CENTURY. (3 hours.) Lectures on the development of the German Novel. Readings from works of Haupt, Eichendorff, Freytag, and Gerlach. Prerequisites: German B3 and B4 or equivalent. Sophomore and Junior years, first semester. T, Th, at 7:30. Professor Bissell.

18. GERMAN NOVEL OF THE NINETEENTH CENTURY. (Continued.) (3 hours.) Lectures continued; readings from the works of Ludwig, Spielhagen, Keller, Storm, Frensdorff. Prerequisite: German C9. Sophomore and Junior years, second semester. T, Th, S, at 7:30. Professor Bissell.

19. C9' and C10'. GERMAN COMPOSITION AND CONVERSATION. (1 hour each.) Required of those making German their

major. Prerequisites: German B3 and B4 or equivalent and German B3' and B4'. Sophomore and Junior years, second semesters. W, at 3:00. Professor Bissell.

C19 and C20. ADVANCED GERMAN PROSE. (3 hours each) Reading of carefully selected addresses by Emperor Wilhelm, Carl Schurz, von Moltke, Bismarck and other men of note, and other selected reading, offering a rich and varied vocabulary in the general fields of political science, history, criticism and philosophy and science. Prerequisites: German B3 and B4. Freshman and Sophomore years, both semesters. T, Th, S, at 9:30. Assistant Professor Matlock.

D5. LESSING. (3 hours.) Lectures on Lessing's works and influence. Reading of his principal dramas and portions of Laocoon and other prose works. Prerequisites: German C9 and C10. Junior and Senior years, first semester. (Not given in 1915-1916.)

D6. GOETHE. (3 hours.) Lectures on Goethe's works and place in literature, relation to Schiller. Reading of Faust, Part I, and at least two other works. Prerequisite: German D5. Junior and Senior years, second semester. (Not given in 1915-1916.)

D7. OUTLINE COURSE IN THE HISTORY OF GERMAN LITERATURE AND LANGUAGE TO THE AGE OF LESSING. (3 hours) Lectures supplemented by assigned readings from the great medieval epics. Prerequisites: German C9 and C10 or equivalent. Junior and Senior years, first semester. M, W, F, at 11:15. Professor Bissell and Assistant Professor Matlock.

D8. CONTINUATION OF D7 FROM LESSING TO THE DEATH OF GOETHE. (3 hours.) Reading of representative works of Lessing, Schiller and Goethe. Prerequisite: German D7. Junior and Senior years, second semester. M, W, F, at 11:15. Professor Bissell and Assistant Professor Matlock.

D11. SCIENTIFIC GERMAN. (3 hours.) Based on Hodge's Course and Brandt and Day's Reader. Assignments to works of scientific writers. Intended primarily for the

planning to do graduate work leading to the degree of Doctor of Philosophy. Prerequisites: German C9 and C10 or equivalent. Junior and Senior years, first semester. T, Th, S, at 8:30. Professor Bissell.

D12. GERMAN COMPOSITION. (3 hours.) Advanced course required of all who desire the recommendation of the Department as teachers. Prerequisites: Two years of college German, including German C9' and C10'. Junior and Senior years, second semester. T, Th, S, at 8:30. Professor Bissell.

Romance Languages and Literatures

FRENCH

A1. ELEMENTARY COURSE. (3 hours.) Aldrich and Foster's Elementary French. Reading of easy prose and poetry; grammatical analysis, composition and dictation. Freshman and Sophomore years, three divisions, first semester. I. M, at 1:00; W, F, at 7:30. II. M, at 3:00; W, F, at 9:30. III. T, Th, S, at 11:15. Associate Professor Jones and Assistant Professor Pecker.

A2. MODERN PROSE AND DRAMA. (3 hours.) Continuation of French A1. Selected readings from Daudet, Coppée, Loti, Scribe and others. Grammatical reviews, composition and dictation; sight reading. Freshman and Sophomore years, three divisions, second semester. I. M, at 1:00; W, F, at 7:30. II. M, at 3:00; W, F, at 9:30. III. T, Th, S, at 11:15. Associate Professor Jones and Assistant Professor Pecker.

B3. FRENCH NOVEL OF THE NINETEENTH CENTURY. (3 hours.) Reading of selected masterpieces of DeVigny, Balzac, Sand, Daudet and others; lectures, essays and composition. Prerequisite: French A2 or equivalent. Freshman and Sophomore years, first semester. T, Th, S, at 7:30, or M, at 2:00; W, F, at 8:30. Assistant Professor Pecker.

C4. FRENCH NOVEL OF THE NINETEENTH CENTURY. (3 hours.) Continuation of French B5. Prerequisite: French B3 or equivalent. Freshman and Sophomore years, second semester. T, Th, S, at 7:30, or M, at 2:00; W, F, at 8:30. Assistant Professor Pecker.

B3' and C4'. FRENCH COMPOSITION. (2 hours each.) Prerequisites: French A1 and A2. Required of those making Romance Languages their major. Freshman and Sophomore years, both semesters. M, W, at 11:15. Assistant Professor Pecker.

D5. CLASSIC DRAMA. (3 hours.) Reading of Corneille's Polyeucte, Racine's Athalie, Molière's Tartufe; essays and sight reading continued; lectures upon the literary history of the period. This course, and all to follow, are conducted entirely in French. Alternates with French D7. Prerequisites: French B3 and C4. Junior and Senior years, first semester. (Not given in 1915-1916.) Associate Professor Jones.

D6. FRENCH PROSE OF THE SEVENTEENTH CENTURY. (3 hours.) Selections from Bossuet, Descartes, Pascal, La Bruyère, Mme. de Sévigné, etc.; essays and lectures upon the history of French literature, continued. Alternates with French D8. Prerequisites: French B3 and C4. Junior and Senior years, second semester. (Not given in 1915-1916.) Associate Professor Jones.

D7. LITERATURE OF THE EIGHTEENTH CENTURY. (3 hours.) Selections from Montesquieu, Voltaire, Rousseau, Beaumarchais, etc. Essays and sight reading; lectures upon the literary history of the period. Alternates with French D5. Prerequisites: French B3 and C4. Junior and Senior years, first semester. M, T, Th, at 4:00. Associate Professor Jones.

D8. ROMANTIC SCHOOL. (3 hours.) Readings from Hugo, Alfred de Musset, Lamartine, etc.; significance and influence of the Romantic movement; essays and lectures upon the history of French literature continued. Prerequisite:

tes: French B3 and C4. Alternates with French D6. Junior and Senior years, second semester. M, T, Th, at 100. Associate Professor Jones.

D7' and D8'. CONVERSATION, PHONETICS AND ADVANCED COMPOSITION. (2 hours each.) An advanced conversational course, required of those specializing in French, and must be accompanied by a D course in literature. Junior and Senior years, both semesters. Hours to be arranged with the instructor. Assistant Professor Pecker.

SPANISH

B21. ELEMENTARY COURSE. (3 hours.) Hills & Ford's Spanish grammar. Padre Isla's Gil Blas de Santillana. Conversation, composition and dictation. Sophomore and Junior years, first semester. T, Th, S, at 8:30. Assistant Professor Pecker.

B22. MODERN PROSE AND DRAMA. (3 hours.) Alarcón's El Capitán Veneno or El Sombrero de tres Picos; Echevaray, O locura ó santidad; Bretón; Quién es ella? Becquer's Tales and Poems. Conversation and dictation; Humphrey's Spanish Prose Composition. Sophomore and Junior years, second semester. T, Th, S, at 8:30. Assistant Professor Pecker.

C23. CONTEMPORARY SPANISH NOVEL. (3 hours.) Selections from the works of Galdós, Valdes, Blasco Ibañez and others. Essays and résumés in Spanish; conversation based upon Bonilla's Spanish Daily Life. Prerequisites: Spanish B21 and B22 or equivalent. Sophomore and Junior years, first semester. T, Th, S, at 9:30. Associate Professor Jones.

C24. CONTEMPORARY SPANISH NOVEL. (3 hours.) Continuation of C3. Reading from Valera, Pereda, Pardo Bazan and others. Lectures in Spanish; essays and résumés. Sophomore and Junior years, second semester. T, Th, S, at 9:30. Associate Professor Jones.

C23' and C24'. COMMERCIAL CORRESPONDENCE. (1 hour each.) Prerequisites: Spanish B21 and B22. Required

of those specializing in Spanish. A course in advanced composition and epistolary usages. Sophomore and Junior years, both semesters. Hours to be arranged with the instructor. Associate Professor Jones.

D25. THE CLASSIC DRAMA. (3 hours.) Selections from Lope de Vega, Tirso de Molina, Calderón de la Barca. Lectures upon the history of Spanish literature. This course as well as D26, conducted entirely in Spanish. Prerequisite: Spanish C24 or equivalent. Junior and Senior years. M, W, F, at 11:15. Associate Professor Jones.

D26. SPANISH PROSE OF THE SIXTEENTH AND SEVENTEENTH CENTURIES. (3 hours.) Readings from Cervantes *El Quijote* and the *Novelas Ejemplares*; the picaresque novel; *Lazarillo de Tormes*. Lectures continued. Prerequisite: Spanish C24 or equivalent. Junior and Senior years, second semester. M, W, F, at 11:15. Associate Professor Jones.

ITALIAN

B31. ELEMENTARY COURSE. (3 hours.) Young's Italian Grammar. De Amicis' *Cuore*; Goldoni's *La Locandiera*. Drill in pronunciation; composition and dictation. Junior and Senior years, first semester. M, at 9:30; W, F, at 3:00. Associate Professor Jones.

B32. ELEMENTARY COURSE. (3 hours.) Continuation of Italian B31. Manzoni's *I promessi Sposi*; Silvio Pellico's *Le mie Prigioni*; short stories and plays from modern authors. Grandgent's Italian prose Composition; conversation and dictation. Junior and Senior years, second semester. M, at 9:30; W, F, at 3:00. Associate Professor Jones.

C33. ITALIAN CLASSICS. (3 hours.) Boccaccio, Petrarch, Ariosto and Tasso. Lectures upon the history of Italian literature. Prerequisite: Italian B32 or equivalent. Junior and Senior years, first semester. T, Th, S, at 8:30. Associate Professor Jones.

B34. CLASSICS (Continued.) (3 hours.) Dante's *Inferno*, with selections from the *Purgatorio* and *Paradiso*. Amintore's study of the *Divine Comedy*. Essays and lectures continued. Prerequisite: Italian B32 or equivalent. Junior and Senior years, second semester. T, Th, S, at 8:30. Associate Professor Jones.

Fine Arts

ART

Credit is given toward graduation for courses in art, provided the work is sufficiently advanced and the requirements are met as to readings and attendance on lectures dealing with the history and theory of art. Three hours of credit involve two two-hour lessons in class and five hours of practice per week. Practice work is done in the studio, save as from time to time work outside is arranged by the instructor, and all practice work is criticized by the instructor. Attendance on lectures is substituted at times for one of the weekly practice hours.

All courses except Art B11 and B12 are given by Assistant Professor Jenkins, the head of the Department.

A1. (3 hours.) Drawing from casts and objects; painting in water colors over charcoal; color problems in hues, tints, intensities and values; painting still life from objects. Freshman year, first semester.

A2. (3 hours.) Design—pure and applied; landscape and flowers from nature in water color and pastels. Freshman year, second semester.

B3. (3 hours.) Drawing from cast—full-length figure; applied perspective; wash painting in water colors for architectural design. Sophomore year, first semester.

B4. (3 hours.) Designing book covers and commercial advertising; pen and ink rendering. Sophomore year, second semester.

C5. (3 hours.) Anatomy of head; drawing head from life in charcoal; head and figure in pen and ink; painting from still life in oil colors. Junior year, first semester.

C6. (3 hours.) Anatomy of full-length figure; particular attention given to construction rather than finish drawings. Painting in oil colors. Junior year, second semester.

D7. (3 hours.) Drawing and painting; portrait of a figure from life; landscape from nature. Senior year, first semester.

D8. (3 hours.) Drawing and painting; portrait of a figure; flowers and landscape. Senior year, second semester.

B9 and B10. ART APPRECIATION. (1 hour each.) Lectures and assigned readings. The course covers the critical study of masterpieces, home decoration, church adornment and art in dress. The terminology and technique of the lines of art are fully discussed. Credit is given only when accompanied by Art B3 and B4, or C5 and C6, or D7 and D8, or by a special course in Art involving one two-hour lesson and four hours of practice work per week. For the special course two hours additional credit per semester are given. Prerequisites: Art A1 and A2. Sophomore, Junior and Senior years, both semesters. M, 11:15.

Courses in Graphics, Machine Drawing, Descriptive Geometry, and Perspective are described under the Department of Engineering.

B11. HISTORY OF ART. (3 hours.) Outline study of oriental and classical periods of architecture, sculpture and painting. Junior and Senior years, first semester. M, T, Th, at 4:00. Professor Spalding.

B12. HISTORY OF ART. (3 hours.) Outline study of Gothic and renaissance architecture, sculpture and painting. Junior and Senior years, second semester. M, T, Th, at 4:00. Professor Spalding.

MUSIC

A1 and A2. ELEMENTARY MUSIC AND EAR TRAINING. (2 hours each.) A course dealing with the rudiments of music, including notations, rhythm, intervals, scales and definitions in terms. Extended work in ear-training, aiming to teach discriminative listening, is conducted by an assistant. A text book is used. Three recitations to count as two hours. Freshman and Sophomore years, two divisions, both semesters. I. T, Th, S, at 7:30. II. M, at 9:30; W, F, at 3:00. Assistant Professor Allen and Assistant.

B3 and B4. MUSICAL HISTORY AND APPRECIATION. (3 hours each.) Lectures are given on the development of music from its earliest stages. The history of church music, opera, and oratorio; biographical sketches of famous composers, with description of their principal works. Recitals, to aid in appreciation, are given bi-weekly. A textbook is used. Sophomore year, both semesters. M, at 8:30; W, F, at 2:00. Miss Clapp.

B5 and B6. HARMONY. (3 hours each.) A study of intervals, scales, chord construction and their relation. An abundance of excerpts are examined. Especial emphasis is laid upon the harmonization of melodies, as well as practical application at the key-board of the principles involved. Creative work is encouraged from the beginning. The new text by Carolyn A. Alchin is used. Prerequisite: Music A1 and A2, and an elementary knowledge of the pianoforte. Sophomore and Junior years, both semesters. T, Th, S, at 11:15. Assistant Professor Allen.

C7 and C8. COMPOSITION I. (3 hours each.) The first semester will be devoted to a study of Simple Counterpoint in all species in two, three and four voices. The aim is to develop technique in smooth voice leading. Creative work in the simpler forms of Free Composition is undertaken in the second semester. Prerequisite, Music B5 and B6. Junior and Senior years, both semesters. T, Th, S, at 9:30. Assistant Professor Allen.

D9 and D10. COMPOSITION II. (3 hours each.) Original work leading up to the Sonata form constitutes the bulk of this course. Prerequisite: Music C7 and C8. Junior and Senior years, both semesters. (Not given in 1915-1916.) Assistant Professor Allen.

C11. FORM. (3 hours.) The essentials of Form in musical composition: sentence, phrase, motif, rhythm and modulation. Synthetical study of simple forms. Analysis of Canon, Fugue, Sonata, etc., and study of chamber music. A text book is used. Prerequisites: Music B5 and B6. Junior and Senior years, first semester. M, W, F, at 11:15.

B12. MUSICAL APPRECIATION. (3 hours.) A course covering musical appreciation may be given the second semester if there is demand. No prerequisites. M, W, F, at 11:15.

II. Mathematics, Physical and Biological Sciences

Mathematics and Astronomy

MATHEMATICS

The courses in mathematics designated A1 and A2, A3 and B4, A5 and A6, A9 and A10, and B7 and B8 are intended primarily for Freshmen. Students who enter with credit for three and a half or four units of commended work in mathematics, including solid geometry and trigonometry, may take Mathematics B7 and B8, or B13 and B14. Mathematics B7 and B8 are required of students in engineering and recommended for advanced work in mathematics and physics. Students who wish to take further work in mathematics, but who have not sufficient preparation for the courses, may take Mathematics A1 and A2, or A3 and B4, or A9 and A10, according to their preparation and need. Mathematics A5 and A6 are intended primarily for those who do not expect to take further work in the subject.

1. SOLID GEOMETRY. (3 hours.) The geometry of space with original exercises and problems. Freshman year, first semester. M, at 3:00; W, F, at 9:30; second semester, T, Th, S, at 11:15. Associate Professor Russell and Assistant Professor Brown.

2. PLANE TRIGONOMETRY. (3 hours.) Essential principles and applications to problems in surveying. Freshman year. Second semester, M, at 3:00; W, F, at 9:30; first semester, T, Th, S, at 11:15. Associate Professor Russell and Assistant Professor Brown.

3 and B4. ALGEBRA. (3 hours each.) Review of fundamental notions and operations, quadratic equations, ratio, proportion and variation, commensurable, incommensurable, imaginary numbers, progressions, permutations and combinations, binomial theorem, series, undetermined coefficients, logarithms, determinants, theory of equations. Freshman year, both semesters. M, at 3:00; W, F, at 9:30. Associate Professor Russell.

5 and A6. ELEMENTARY ANALYSIS. (3 hours each.) A theoretical and historical study of some of the most interesting principles of mathematical analysis. Freshman year. Both divisions, both semesters. M, at 2:00; W, F, at 8:30; T, Th, S, at 3:00; W, F, at 9:30. Assistant Professor Berry.

9. ALGEBRA. (3 hours.) A semester course in the essentials of algebra. Freshman year, first semester. M, at 2:00; W, F, at 8:30. Associate Professor Russell.

10. TRIGONOMETRY. (3 hours.) The elements of plane trigonometry with practical problems. Freshman year, second semester. M, at 2:00; W, F, at 8:30. Associate Professor Russell.

17. ANALYTIC GEOMETRY AND CALCULUS. (4 hours.) A course in the elementary principles of graphical representation, the study of linear equations, and equations of the first degree in a single variable, employing both the graphical and the derivative in solution and discussion. Freshman

and Sophomore years, first semester. (Not given 1915-1916.)

B8. ANALYTIC GEOMETRY AND CALCULUS. (4 hours.) continuation of Mathematics B7 involving differentiation of algebraic and elementary transcendental functions, equations of the second degree, intersection of curves and transformation of co-ordinates, tangents and polars, polar coordinates, and curvature. Freshman and Sophomore years, second semester. (Not given in 1915-1916.)

Mathematics B7 and B8 constitute the first half of consecutive, two-year course in mathematics comprising the essential principles of analytic geometry and calculus with their applications to curve tracing and to the solution of equations, and arranged in such a manner as to develop practical knowledge of the principles of mathematical analysis. The course involves the more important principles of algebra and trigonometry, but disregards the order and divisions in which these subjects are usually treated. It is based upon the text, "A Course in Mathematics," Woods and Bailey. The second year of this course is given in Mathematics C17 and C18.

For the year 1915-1916 Mathematics B7a and B8a will be given in place of B7 and B8.

B7a. ANALYTIC GEOMETRY. (3 hours.) A course in plane analytic geometry designed especially for students in physics and engineering. Freshman and Sophomore years, first semester. T, Th, S, at 11:15. Assistant Professor Belcher.

B8a. ANALYTIC GEOMETRY AND CALCULUS. (3 hours.) An introduction to differential calculus with applications to analytic geometry and mechanics. Designed to follow Mathematics B7a. Freshman and Sophomore years, second semester. T, Th, S, at 11:15. Assistant Professor Belcher.

C11 and C12. SURVEYING. (3 hours each.) The same as Engineering C11 and C12. Alternates with Mathematics

- and C16. Sophomore and Junior years, both semesters. at 7:30; T, W, at 1:00. Assistant Professor Belcher.
13. ANALYTIC GEOMETRY AND CALCULUS. (3 hours.) elementary course in the principles of co-ordinate geometry and the introduction to the differential calculus. Designed to follow Mathematics A1 and A2, A3 and A4, or A10. Sophomore year, first semester. T, Th, S, at 9:30. Associate Professor Russell.
14. DIFFERENTIAL AND INTEGRAL CALCULUS. (3 hours.) first course in the differential and integral calculus with applications chiefly to analytic geometry; designed to follow Mathematics B13. Sophomore year, second semester. T, S, at 9:30. Associate Professor Russell.
15. DESCRIPTIVE GEOMETRY. (3 hours.) Study and practice in the elements of projection and perspective; intersections of surfaces and solids. Alternates with Mathematics C11. Prerequisites: Engineering A1 and A2. Sophomore year, first semester. (Not given in 1915-1916.) Assistant Professor Belcher.
16. PERSPECTIVE. (3 hours.) Principles of shades and shadows, of perspective and the perspective of shadows; with practice in perspective drawing. Alternates with Mathematics C12. Prerequisite: Mathematics C15. Sophomore year, second semester. (Not given in 1915-1916.) Assistant Professor Belcher.
- 17 and C18. ADVANCED ANALYTIC GEOMETRY AND CALCULUS. (3 hours each.) Fundamental processes in integration with applications to analytic geometry and mechanics; solutions of several variables and space co-ordinates; partial differentiation; differential equations. These courses constitute the second half of the two-year course referred to under Mathematics B7 and B8. Sophomore and Junior years, both semesters. M, W, F, at 11:15. Assistant Professor Belcher.
19. DIFFERENTIAL AND INTEGRAL CALCULUS. (3 hours.) continuation of Mathematics B14. Junior year, first semester.

ester. M, W, F, at 11:15. (May not be given in 1915-1916.) Associate Professor Russell.

D20. THEORY OF EQUATIONS. (3 hours.) Analysis and solution of higher algebraic equations; review of determinants with elementary reductions and processes, elimination and linear transformations. Alternates with Mathematics D24. Junior and Senior years, first semester. (May not be given in 1915-1916.)

D24. DIFFERENTIAL EQUATIONS. (3 hours.) A general course in the theory and solution of differential equations. Junior and Senior years, second semester. (May not be given in 1915-1916.) Associate Professor Russell.

The following cycle of courses is given to Juniors and Seniors: Mathematics D25 and D26, Mathematics D27 and D28, and some form of Mathematics D21 and D22. At present but one of the three courses is given each year.

D21 and D22. HIGHER ANALYSIS. (3 hours each.) This course is an extension of the more elementary analysis developed in Mathematics B7, B8, C17 and C18. Its content differs from year to year. Its purpose is by the study of the principles and methods of some of the great modern mathematicians like Cauchy, Riemann, Clebsch and Gauss in certain subjects like the theory of functions or the general theory of algebraic curves, to furnish an introduction to the realm of higher mathematics and to develop still further independence and power in sound mathematical reasoning. Junior and Senior years, both semesters. (Not given in 1915-1916.) Professor Brackett.

D25 and D26. ANALYTIC MECHANICS. (3 hours each.) Mathematical treatment of important principles in mechanics; applications to numerous problems; discussion of general application of analytic reasoning to other physical problems. Junior and Senior years, both semesters. (Not given in 1915-1916.) Professor Brackett.

D27 and D28. PROJECTIVE GEOMETRY. (3 hours each.) A deductive study of general projective geometry with attention

to the foundations of geometry. Junior and Senior years, both semesters. M, at 2:00; W, F, at 8:30. Professor Brackett.

ASTRONOMY

1 and B2. GENERAL ASTRONOMY. (3 hours each.) A general course of lectures and recitations in descriptive astronomy with regular evenings at the observatory, and ample observations systematically recorded in notebooks. This course is designed for students who have had only elementary courses in physics, chemistry and trigonometry. Classroom, two hours a week; lecture and observatory amounting to one exercise a week. Junior and Senior years, both semesters. M, W, F, at 11:15. Professor Brackett.

3. DESCRIPTIVE ASTRONOMY. (3 hours.) A study of essential facts and principles of astronomy with lectures and readings on the history of its development as a science and discussion of theories of cosmogony and evolution. Systematic observation of certain objects with the equatorial. This course is designed for students who have a working knowledge of analytic geometry and calculus and of the more important principles in physical science; or it may be taken as an advanced course by those who have had Astronomy 1 and B2. Some preparation in free-hand and mechanical drawing also is very desirable. Junior and Senior years, both semesters. M, at 3:00; W, F, at 9:30. Professor Brackett.

4. THEORETICAL AND PRACTICAL ASTRONOMY. (3 hours.) Spherical co-ordinates; least squares; determination of time, latitude and longitude with sextant and theodolite; regular observation work with equatorial and transit. Prerequisites: Astronomy B1 and B2, or C3. This course may be taken in conjunction with Astronomy B1 by students who have had sufficient preparation in mathematics and drawing. Ordinarily alternates with Astronomy D6. Classroom, one hour a week; lecture and observatory amounting

to two exercises a week. Junior and Senior years. (Not given in 1915-1916.) Professor Brackett.

D6. ASTROPHYSICS. (3 hours.) A review of the principles of spectrum analysis, and the results obtained in physical and chemical laboratories; a study of astronomical spectroscopy, of forms of spectographs and spectroheliographs and of recent advances in the subject; observatory work with the horizontal solar telescope and spectrograph. Ordinarily alternates with Astronomy D4. Prerequisites: Astronomy B1 and B2. This course may be taken in conjunction with Astronomy B2 by students who have sufficient preparation in physical science. Class room, one hour a week; lecture and observatory amounting to two exercises a week. Junior and Senior years, second semester. M, 3:00; W, F, at 9:30. Laboratory hours to be arranged. Laboratory fee \$5.00. Professor Brackett.

C7 and C8. ASTRONOMICAL SEMINAR. (1 hour each) Reading and discussion of current astronomical literature and editorial assistance on the Astronomical Publications. Open to a limited number who have completed a year of work in the above courses in Astronomy. Senior year, both semesters. Hours to be arranged. Professor Brackett.

Those who wish to select Astronomy as a major should consult the head of the department concerning the requirements.

Physics and Engineering

PHYSICS

B1. GENERAL PHYSICS. (4 hours.) Mechanics and Sound. Lectures, recitations and laboratory work. This course is designed for students desiring to take one year of work in general physics, either for its cultural value, or to meet the physics requirement of courses in medicine, biology, chemistry, or astronomy. It may be successfully pursued without any previous course in the subject. Prerequisites:

gebra, geometry and plane trigonometry. Class room, three hours a week; laboratory, one exercise a week. Freshman and Sophomore years, first semester. Class room, T, Th, S, at 8:30; laboratory, T, at 1:00. Laboratory fee \$4.00. Professor Hitchcock.

2. HEAT, MAGNETISM, ELECTRICITY AND LIGHT. (4 hours.) Continuation of Physics B1. Class room, three hours a week; laboratory, one exercise a week. Junior year, second semester. Class room, T, Th, S, at 8:30; laboratory, at 1:00. Laboratory fee, \$4.00. Professor Hitchcock.

3. MECHANICS OF SOLIDS AND FLUIDS. (3 hours.) Lectures and recitations. Prerequisites: A good working knowledge of elementary mathematics, including analytic geometry and calculus, and a course in secondary school physics. Required in all engineering courses. Three hours a week. Sophomore and Junior years, first semester. T, Th, S, at 11:15. Professor Hitchcock.

4. HEAT, WAVE MOTION AND SOUND. (3 hours.) Continuation of Physics C3. Sophomore and Junior years, second semester. T, Th, S, at 11:15. Professor Hitchcock.

5 or D5. LIGHT, STATIC ELECTRICITY AND MAGNETISM. (3 hours.) Continuation of Physics D4. If taken as a D course additional work will be required. Three hours a week. Junior and Senior years, first semester. (Not given 1915-1916.) Professor Hitchcock.

6. CURRENT ELECTRICITY. (3 hours.) Continuation of Physics C5 or D5. Junior and Senior years, second semester. (Not given in 1915-1916.) Professor Hitchcock.

Courses C3, D4, C5 and D6 are designed to meet the physics requirement of the best engineering schools. Accordingly considerable attention is given to the applications of the various subjects discussed to engineering practice.

9 and C10. PHYSICAL MEASUREMENTS. (1½ hours.) Exposition of the theory and methods of physical measurements; instruction and practice in the adjustment and use of instruments of precision in the various branches of

the subject. This course may be taken in conjunction with Physics C3, D4, C5 and D6; or may be taken entirely with C5 and D6 by those who have had the equivalent of Physics C3 and D4. Junior and Senior years, both semesters. (Not given in 1915-1916.) Laboratory fee \$4.00 each semester. Professor Hitchcock.

D13 and D14. APPLIED MECHANICS. (3 hours each.) Same as Engineering D13 and D14. Junior and Senior years, both semesters. Assistant Professor Belcher.

ENGINEERING

The College does not give at present a full technical course in engineering; but for students who contemplate engineering work and wish also the foundation and culture of college training, a course of studies has been arranged. Graduates who have followed this course complete their work for a degree in the standard schools of engineering or technology in two years.

A1 and A2. GRAPHICS. (2 hours each.) A course in lettering and linear drawing, including the use and care of instruments, practice in lining and accurate construction of geometrical problems and construction of geometrical curves. Freshman year, two exercises a week, both semesters. Laboratory, Th, F, at 1:00. Assistant Professor Belcher.

In case a student offers for credit other work in Graphics instead of Engineering A1 and A2, the certificate of former work must be accompanied by the plates drawn and the instructor will judge whether the character and amount of work done is satisfactory. This must in every case include evidence of ability in lettering.

B3 and B4. GRAPHICS. (2 hours each.) An introductory course in orthographic and isometric projections, shade lines and shadows. Prerequisites: Engineering A1 and A2. Sophomore year, two exercises a week, both semesters. Laboratory, Th, F, at 1:00. Assistant Professor Belcher.

C11 and C12. SURVEYING. (3 hours each.) Class room

; field work with compass, transit, level and sextant; ing and computation from field notes; topographical ying and map work (Gillespie; Johnson.) Prerequi- Mathematics B7 and B8 and Engineering A1 and Sophomore year, both semesters. Alternates with En- ring C15 and C16. M, at 7:30; T, W, at 1:00. As- tant Professor Belcher.

5. DESCRIPTIVE GEOMETRY. (3 hours.) Study and ice in the elements of projection and perspective; in- ctions of surfaces and solids. Alternates with Engi- ng C11. Prerequisites: Engineering A1 and A2. omore year, first semester. (Not given in 1915-1916.) tant Professor Belcher.

6. PERSPECTIVE. (3 hours.) Principles of shades and ews, of perspective and the perspective of shadows; practice in perspective drawing. Alternates with En- ring C12. Prerequisite: Mathematics C15. Sopho- year, second semester. (Not given in 1915-1916.) tant Professor Belcher.

3 and D14. APPLIED MECHANICS. (4 hours each.) A y of the principles of mechanics of rigid bodies with y problems selected with reference to the needs of engi- ng students. The calculus and graphical methods are y used. The course includes problems in statics, on ions, stresses in frames, center of gravity, moments of ia, and problems in kinematics and dynamics, including inear and curvilinear motion, harmonic motion, mo- um and angular momentum, work, power and kinetic y. Junior and Senior years, both semesters. M, T, Th, 00. Assistant Professor Belcher.

CHEMISTRY

Students who wish to major in Chemistry should be pre- l to meet the following requirements:

A knowledge of elementary Physics, equivalent to ics B1 and B2.

2. Sufficient acquaintance with French and German to enable the student to follow with tolerable ease the literature of the subject.

3. Mathematics, including the elements of the calculus.

4. Chemistry C7, C8, C9 and C10, and six or more hours of D courses in Chemistry, the precise nature and number to be determined in individual cases.

5. In some cases a special examination covering the general field of Chemistry.

A1. THE ELEMENTS OF CHEMISTRY. (4 hours.) An introductory course covering the general field, and intended for those who have no previous knowledge of the subject. Class room, three hours a week; laboratory, one hour a week. Freshman year, either semester. Class room, first semester, T, Th, S, at 8:30; laboratory, first semester, T, Th, S, at 7:30, or T, at 1:00. Laboratory fee, \$6.00. (Not given the second semester of 1915-1916.) Professor Lyman Assistant.

A2. INORGANIC CHEMISTRY. (3 hours.) General inorganic chemistry, devoted chiefly to the chemistry of metals. Open to those who have taken Chemistry A1 and who have presented Chemistry for entrance. To be accompanied by Chemistry B5. Class room, three hours a week. Freshman year, either semester. First semester, T, Th, S, at 7:30; second semester, T, Th, S, at 8:30. Assistant Professor Bartlett and Mr. Woodford.

B3. GENERAL INORGANIC CHEMISTRY. (3 hours.) Chemistry of the non-metals, with a further development of the theories of chemistry. Prerequisite: Chemistry A2. To be accompanied by Chemistry B6. Class room, three hours a week. Freshman and Sophomore years, either semester. (Not given the first semester of 1915-1916.) Second semester, T, Th, S, at 7:30. Assistant Professor Bartlett.

B4. INORGANIC PREPARATIONS. (2 hours.) Preparation of some simpler inorganic compounds, which illustrate the matter brought out in class room in the courses listed above.

ended for those who wish for more experimental work is found in the courses in qualitative analysis. Primarily intended to accompany Chemistry A2. Freshman year, either semester. (Not given in 1915-1916.)

5. QUALITATIVE ANALYSIS. (2 hours.) Analysis of acids and positive ions. Laboratory periods twice a week, with occasional class room meetings. Intended to accompany Chemistry A2. Freshman year, either semester. Class room, F, at 3:00, M, at 9:30. Laboratory, two periods, selected from the following: M, at 7:30; T, at 1:00; Th, at 1:00; F, at 1:00. Laboratory fee, \$10.00. Assistant Professor Bartlett and Assistant.

6. QUALITATIVE ANALYSIS. (2 hours.) Inorganic analysis, with special reference to non-metals and negative ions. Laboratory periods twice a week, with occasional class room meetings. Prerequisite: Chemistry B5. Intended to accompany Chemistry B3. Freshman and Sophomore years, either semester. Class room, F, at 3:00; M, at 9:30. Laboratory, two periods, selected from the following: M, at 7:30; T, at 1:00; Th, at 1:00; F, at 1:00. Laboratory fee, \$10.00. (Not given the first semester of 1915-1916.) Assistant Professor Bartlett and Assistant.

7. QUANTITATIVE ANALYSIS. (3 hours.) Theory and practice of quantitative methods, chiefly gravimetric, including problems in stoichiometry. Intended to give the student a knowledge of the fundamental methods of work. Prerequisites: Chemistry B5 and B6. Occasional lectures; laboratory, three exercises a week. Sophomore, Junior and Senior years, first semester. Lectures, M, at 9:30; laboratory, M, at 7:30; T, Th, at 1:00. Laboratory fee, \$12.00. Assistant Professor Bartlett and Assistant.

8. QUANTITATIVE ANALYSIS. (3 hours.) Similar in purpose to Chemistry C7, except that the methods taken up are chiefly volumetric. Prerequisite: Chemistry C7. Sophomore, Junior and Senior years, second semester. Lectures,

M, at 9:30; laboratory, M, at 7:30; T, Th, at 1:00. Laboratory fee, \$12.00. Assistant Professor Bartlett and Assistant

C9 and C10. ORGANIC CHEMISTRY. (3 hours each.) study of the more important compounds of carbon, the preparation of about twenty organic substances. requisites: Chemistry A1 and A2, or A2 and A3. Class room, two hours a week; laboratory, one exercise a week. Sophomore, Junior and Senior years, both semesters. Class room, M, W, at 11:15; laboratory, T, or F, at 1:00. Laboratory fee, \$6.00 per semester. First semester, Professor Lyman. Second semester, Assistant Professor Bartlett.

D11 and D12. MINERAL CHEMISTRY. (3 hours each.) study of the sources, composition, properties and uses of minerals, accompanied by blowpipe analysis and the identification of about one hundred minerals. The study of crystallographic properties and molecular structure of inorganic and organic compounds offers to the student an excellent field of investigation. Must be preceded or accompanied by Chemistry C7 and C8. Class room, two hours a week; laboratory, one exercise a week. Junior and Senior years, both semesters. Class room, M, at 1:00; W, at 7:30. Laboratory, M, at 7:30. Laboratory fee, \$4.00 per semester. First semester, Professor Lyman. Second semester, Mr. Woodford.

D13. ORGANIC PREPARATIONS. (3 hours.) Intended to supplement Chemistry C9 and C10. The preparation of and determination of more complicated compounds of carbon, and the determination of their molecular weight, composition, etc. requisites: Chemistry C9 and C10. Class room, one hour a week; laboratory, two exercises a week. Junior and Senior years, first semester. Class room, F, at 7:30. Laboratory, M, at 7:30; T, at 1:00. Laboratory fee, \$10.00. Professor Lyman.

C15 and C16. AGRICULTURAL CHEMISTRY. (3 hours each.) A study of soils, fertilizers, insecticides, fungicides, etc., including more especially their composition, properties,

tion to plant growth. Prerequisites: Chemistry B5 B6. Chemistry D11 and D12, and Geology B1 and B2 recommended. Class room, three hours a week. Sophomore, Junior, and Senior years, both semesters. Class room, at 3:00; W, F, at 9:30. (First semester not given in 1916.) Second semester, Mr. Woodford.

17. ADVANCED QUANTITATIVE ANALYSIS. (3 hours.) Further development and continuation of Chemistry C7 and D17. Ordinarily this will take the form of agricultural analysis including the study of the chemical and physical composition of the soil. A Hilgard elutriator is used to make a mechanical analysis of soils. Chemistry C15 and C16 must precede or accompany this course. Laboratory, three exercises a week. Junior and Senior years, first semester. Laboratory, W, Th, F, at 1:00. Laboratory fee, \$12.00. Assistant Professor Bartlett and Assistant.

18. ADVANCED QUANTITATIVE ANALYSIS. (3 hours.) Continuation of Chemistry D17. Ordinarily this will take the form of special agricultural analysis, including the study of the composition of fertilizers, insecticides and fungicides. In this case Chemistry C15 and C16 must precede or accompany this course. Laboratory, three exercises a week. Junior and Senior years, second semester. Laboratory, W, Th, F, at 1:00. Laboratory fee, \$12.00. Assistant Professor Bartlett and Assistant.

19 and D20. SPECIAL ADVANCED CHEMISTRY. (1 hour a week.) The reading and discussion of chemical literature, preparation of reports, etc. Prerequisites: Chemistry C8, C9 and C10, and Physics B1 and B2 or an equivalent; also a reading knowledge of a modern language. Credit is given for this work only when it is taken in connection with some other D course in this department. Class room, one hour a week. Senior year, both semesters. Class room, hours to be arranged. Professor Lyman and Assistant Professor Bartlett.

D21 and D22. PHYSICAL CHEMISTRY. (3 hours each.) survey of the whole subject is given, including the relation of mass and volume, phase relations, thermochemistry, thermodynamics, chemistry of solutions and the dissolution hypothesis, electrochemistry and optical chemistry. laboratory work consists of the study of physico-chemical methods as related to the subject matter of the lecture. Class room, two hours a week; laboratory, one period a week. Open to Juniors and Seniors who have passed satisfactorily Chemistry C7 and C8 and Physics B1 and Analytic Geometry and Calculus must precede or accompany this course. Lectures, M, at 2:00; W, at 8:30. Laboratory, W, at 1:00. Laboratory fee, \$8.00. Assistant Professor Bartlett.

A breakage deposit of \$5.00 is required of all students taking laboratory courses. At the conclusion of the year the deposit, less breakage, is returned.

GEOLOGY

B1 and B2. GEOLOGY. (3 hours each.) Consideration of problems relating to dynamical and structural Geology during the first semester. During the second semester the course will include Historical Geology and laboratory work on topographical and geological maps, lectures on geological formation; use of plane table; rock classification. Prerequisites: Chemistry A1 and A2, Biology A1 and A2 or their equivalents. Junior and Senior years, both semesters. T, Th, S, at 9:30; laboratory hours equivalent to one period a week during second semester to be arranged with the instructor. Assistant Professor Crawford.

Biological Sciences

So important are German and Chemistry to the advancement of courses in Biological Sciences that the necessity for thorough preparation in these subjects is especially emphasized for those who elect a major group in these departments.

GENERAL BIOLOGY

1. GENERAL BIOLOGY. (3 hours.) A course introductory to the study of animal life, comprising field and laboratory work on living organisms, and especially scientific methods in observing and recording facts. This course is prerequisite to further work in zoology. Class room, two hours a week; laboratory, one exercise a week. Freshman year, first semester. Class room, M, W, at 11:15; laboratory, T, or Th, at 1:00. Laboratory fee, \$5.00. Professor and Assistant.

2. GENERAL BIOLOGY. (3 hours.) A brief study of some of the fundamental biological phenomena manifested in the plant kingdom, such as evolution, adaptational developments, life processes, etc. A slight acquaintance, also, will be gained with the various groups of plants and their chief characteristics. Laboratory and field work; one period a week; lecture, two hours a week. This course is intended primarily for those who desire a glimpse into the general principles of Biology. Those intending to major in botany are advised to enter directly Botany B21. Freshman year, second semester. Class room, M, W, at 11:15; laboratory, T, or Th, at 1:00. Laboratory fee, \$5.00. Assistant Professor Crawford.

ZOOLOGY

11. GENERAL ZOOLOGY. (3 hours.) Lectures and laboratory work. Types of classes and phyla of animals discussed and studied and careful drawings made of parts and organs. Constant use of the microscope. The large collections of the museum used for illustrative purposes. (Parker, Howell, Brooks and other books of reference.) Class room, two hours a week; laboratory, one exercise a week. Prerequisites: Biology A1 and A2 or equivalents. Sophomore and Junior years, first semester. Class room, T, Th, at 11:15; laboratory, M, at 7:30. Laboratory fee, \$7.00. Professor Hilton.

B12. VERTEBRATE MORPHOLOGY. (3 hours.) A brief treatment of the comparative anatomy and organology of vertebrates, based upon detailed work with representative types of the fishes, amphibians, reptiles, birds and mammals. Laboratory work with skeletons and preserved specimens. For reference, works of Kingsley, Lankester, Parker, Huxley, Hensley, Beddard, Evans, Gadow, Boulenger, and others. Class room, two hours a week; laboratory, one period. Prerequisites: Physiology B3 or Zoology B11. Sophomore, Junior years, second semester. T, Th, at 11:15; laboratory, M, at 7:30. Laboratory fee, \$5.00. Professor Hilton.

B18. ENTOMOLOGY. (3 hours.) The anatomy and physiology of insects studied and their life history traced. Insects reared and their transformation studied; species of all orders identified by use of laboratory manuals. A good collection of native and exotic insects is at the command of the student. Laboratory and field work made prominent. (Comstock, LeConte, Williston, Scudder, Cresson, and other books of reference.) Class room, two hours a week; laboratory, one exercise a week. Prerequisites: Biology A1, Physiology B3, or Zoology B11. Sophomore, Junior, Senior years, two divisions, second semester. Class room, M, W, at 11:15; laboratory, T, or Th, at 1:00. Laboratory fee, \$5.00. Professor Hilton.

C31. SYSTEMATIC INVERTEBRATE ZOOLOGY. (3 hours.) Local groups of invertebrates exclusive of insects will be studied in the field and laboratory. The particular groups considered will be: Diplopods, chilopods, arachnids. Prerequisite: Zoology B11 or B18. Sophomore or Junior years, first semester. Lecture, one hour a week, Th, at 7:30; laboratory and field work, two periods a week; laboratory, M, 7:30; or W, at 1:00. Laboratory fee, \$5.00. Professor Hilton.

C32. SYSTEMATIC VERTEBRATE ZOOLOGY. (3 hours.) Local groups of amphibians, reptiles, birds, and mammals studied in the laboratory and in the field. Prerequisite: Zoology B11. Sophomore

or Junior year, second semester. Lecture, one hour a week, T, Th, at 7:30; field and laboratory work, two periods a week; laboratory, M, at 7:30, or W, at 1:00. Laboratory fee, \$3.00. Professor Hilton.

33. COMPARATIVE NEUROLOGY. (3 hours.) Comparative anatomy of some special system of organs, such as the central nervous system of vertebrates. The laboratory work consist of special dissections and the study of microscopical preparations. Prerequisites: Zoology B11 and B12, Physiology B3 and B4. Junior and Senior years, first semester. Lecture, one hour a week, F, at 1:00; laboratory, two periods a week, M, at 7:30; W, at 1:00. Laboratory fee, \$3.00. Professor Hilton.

34. CYTOLOGY AND COMPARATIVE EMBRYOLOGY. (3 hours.) Laboratory work and experimental studies with developing organisms. This course may be taken only in summer when certain living eggs and larvae can be obtained. Prerequisites: Zoology B11 or Physiology B3 and B4. Sophomore and Junior years. Lecture, F, at 1:00; laboratory, W, at 1:00; M, at 7:30. Professor Hilton.

35. ADVANCED ZOOLOGY. (3 hours.) Comparative anatomy of special groups of invertebrates or vertebrates represented in California and on the West Coast. A continuation of Zoology B11 and chiefly laboratory work. Prerequisite: Zoology B11. Junior and Senior years, first semester. Field work and laboratory. T, Th, F, at 1:00. Professor Hilton.

36. BIONOMICS. (3 hours.) An introduction to modern discussions and modern experimental and statistical evidence in variation, heredity and eugenics. A general treatment of the biological bases of plant and animal breeding, of sociology and human evolution. A course of lectures, essays and prescribed readings and constant reference to the works of DeVries, Galton, Pearson, Davenport, Castle, Huxley, Darwin, Spencer, Weismann, and other recent investigators. Lectures three hours a week. Prerequisite: One year of

Zoology. Junior and Senior years, second semester. M 1:00; W, F, at 7:30. Professor Hilton.

D15 or D16. ADVANCED ZOOLOGY. (3 hours.) A continuation of Zoology D13. Prerequisite: Zoology D13. Junior and Senior years, either semester. Field work and laboratory. Hours to be arranged with the instructor. Laboratory fee, \$7.00. Professor Hilton.

D19 and D20. SPECIAL ENTOMOLOGY. (3 hours each.) Detailed investigations into the anatomy, life histories, and economic relations of some of the groups of insects prejudicial to the interests of mankind. Designed especially for those students intending to become growers, plant economic entomologists, or doctors of medicine. Prerequisites: Biology B11 and B18. Junior and Senior years, either semester. Field work and laboratory. Hours to be arranged with the instructor. Laboratory fee, \$7.00. Professor Hilton.

PHYSIOLOGY

A1 and A2. APPLIED PHYSIOLOGY AND HYGIENE. (2 hours.) A general course in the essentials of personal hygiene, with such brief excursions into the field of physiology as are necessary to an understanding of the hygienic principles involved. Supplementing this study of the problems of the individual, there will be included a survey of the principles of public hygiene and sanitation, and a brief résumé of the most approved measures concerned in first aid to the injured. Required of all Freshmen, both seniors and juniors. F, at 11:15. Assistant Professors Stoughton, Starbuck, and Squire.

B11 and B12. PUBLIC HYGIENE. Advanced course. A series of lectures on the principles and requirements of public sanitation, and the problems of general morbidity and mortality. Required of all Juniors. Hours to be announced. Assistant Professor Stoughton.

B13 and B14. PROBLEMS OF HEREDITY AND EUGENICS, AND RELATED QUESTIONS OF PERSONAL AND PUBLIC HYGIENE. Advanced course. Required of all Seniors. Hours to be announced. Assistant Professors Stoughton and Squire.

B3 and B4. ANATOMY AND PHYSIOLOGY. (3 hours each.) Human and comparative. Lectures and laboratory work. Structures and organs studied and compared with the same in lower vertebrates. Azoux models, preserved specimens of organs, and skeletons are used. Careful drawings by a student of sections, tissues and organs. (Gray, Quain, Stewart, Howells, Mivart, Reighard, Jennings, and other books of reference.) Class room, two hours a week; laboratory, one exercise a week. Sophomore year, both semesters. Class room, W, F, at 1:00; laboratory, T, Th, at 1:00. Laboratory fee, \$3.00. Assistant Professor Stoughton.

D5. HISTOLOGY. (3 hours.) Vertebrate. The microscopic study of cells, tissues and organs of man and the other vertebrates. Special attention given to methods. Those intending to study medicine after graduation will find this course and the course in embryology very helpful. Prerequisite: Physiology B3 and B4. Junior and Senior years, first semester. T, at 7:30; T, Th, at 1:00. Laboratory fee, \$1.00. Professor Hilton.

D6. EMBRYOLOGY. (3 hours.) Comparative vertebrate embryology. A study of the development of vertebrates up to and including the formation of adult organs. The eggs of amphibia, the embryos of birds and mammals, furnish material for the study. Prerequisite: Physiology D5. Junior and Senior years, second semester. T, at 7:30; T, Th, at 1:00. Laboratory fee, \$8.00. Professor Hilton.

BOTANY

B21. GENERAL BOTANY. (3 hours.) A general course covering briefly in two semesters the entire field of botany, with special emphasis on the morphology and phyletic relationships and evolution of plants. A necessary introduc-

tory course for advanced work in Botany. Both laboratory and field work. Laboratory, one exercise a week; lecture, two hours a week. Prerequisite: Biology A2 or its equivalent. Sophomore or Junior year, first semester. W, F, at 7:30; laboratory, W, at 1:00. Laboratory fee, \$3.50. Assistant Professor Crawford.

B22. GENERAL BOTANY. (3 hours.) A continuation of B21, dealing primarily with the flowering plants (Phanerogams.) Prerequisite: B21 or its equivalent. Sophomore or Junior year, second semester. W, F, at 7:30; laboratory, W, at 1:00. Laboratory fee, \$3.50. Assistant Professor Crawford.

C25. MYCOLOGY. (3 hours.) A systematic study of a great group of fungi, with special emphasis on the morphological, systematic and cytological phases. An immense herbarium of fungi is available for reference and study. Very important for those intending to study Plant Pathology. Prerequisites: B21 and B22, or their equivalent. Laboratory, two periods a week; lecture, one hour a week. Junior and Senior years, first semester. S, at 11:15; laboratory, T, Th, at 1:00. Laboratory fee, \$5.00. Assistant Professor Crawford.

D26. PLANT PATHOLOGY. (3 hours.) A study of plant diseases, their causal agents, methods of controlling them and methods of studying them in the laboratory. An important study for those intending to enter into any phase of agriculture. Laboratory, two periods a week; lecture, one hour a week. Prerequisite: Botany C25, unless by special arrangement. Junior and Senior years, second semester. S, at 11:15; laboratory, T, Th, at 1:00. Laboratory fee, \$5.00. Assistant Professor Crawford.

C23. PLANT PHYSIOLOGY. (3 hours.) A study of the behavior and life processes of plants, their nutrition, reproduction, etc. A glass house and a well-equipped laboratory are available for this work. Laboratory, two periods a week; lecture, one hour a week. Prerequisite: Botany B

or and Senior years, first semester. Lecture, Th, at 5; laboratory, M, at 7:30, and F, at 1:00. Laboratory fee, \$10.00. Assistant Professor Crawford.

24. SUBTROPICAL HORTICULTURE. (2 hours.) An introductory course in the study of economic fruits and fruit products of the Pacific Slope and the subtropics. Laboratory, one period a week; lecture, one hour a week. Prerequisite: Botany B22. Junior and Senior years, first semester. Lecture, T, at 11:15; laboratory, Th, at 1:00. Laboratory fee, \$3.50. Assistant Professor Crawford.

27. ADVANCED BOTANY. (3 hours.) A detailed study of the morphology and taxonomy of some of the groups of plants. Chiefly a laboratory course and the work for the most part individual. Both laboratory and field work. Laboratory, two periods a week; conference or class room, one period a week. Prerequisites: Botany A21 and B22. Junior and Senior year, first semester. Hours to be arranged with instructor. Laboratory fee, \$5.00. Assistant Professor Crawford.

28. SPECIAL BOTANY. (3 hours.) Same as Botany B22, or continuation of that course. Prerequisites: Botany A21 and B22. Hours to be arranged with the instructor. Laboratory fee, \$5.00. Assistant Professor Crawford.

31 and D32. SPECIAL MYCOLOGY. (3 hours each.) Special and detailed investigations in fungi or plant diseases. Laboratory and field work and occasional conferences with instructor. Work for the most part is individual. Time to be arranged with the instructor. Prerequisite: Botany B22. Junior or Senior year. Laboratory fee, \$5.00 each. Assistant Professor Crawford.

30. PLANT PROPAGATION. (3 hours.) The elements and principles of the propagation of plants and improvement of plant varieties. Practice in the care of seeds, cuttings, bulbs and potted plants; in grafting and budding; in hybridizing and selecting of plants, etc. A glass house, lath house and

special laboratory equipment are available for this course. Designed for those who are interested in nursery work, landscape gardening, and many phases of horticulture. Classroom, one hour a week; laboratory, two periods a week. Prerequisite: C23. Junior and Senior years, second semester. Class room, Th, at 11:15; laboratory, T, F, at 1:00. Laboratory fee, \$10.00. Assistant Professor Crawford.

Physical Education

A course in physiology and hygiene, described under Department of Physiology as A1 and A2, Applied Physiology and Hygiene, is required of all Freshmen.

MEN

Physical measurements are taken twice; at beginning of first semester and at close of second; primarily to determine vital strength and organic weakness; secondarily, to determine muscular strength. Prescribed exercises for individuals below the normal; measurements plotted on anthropometrical table to determine development and comparison with the average. Required of all Freshmen, both semesters; optional for Sophomores, Juniors, and Seniors.

A medical examination is conducted by an authorized physician to determine the vitality and organic strength of the student. Required of all students.

A1 and A2. GYMNASTICS. (1 hour each.) Drill and setting-up exercises, U. S. A. Regulations without apparatus. Swedish System combined with apparatus, dumb bells and Indian clubs. Two class exercises a week. Two periods of games or outdoor exercise to be elected by the student in consultation with the director. Certain periods of exercise replaced by lectures on personal hygiene. Required, Freshman year, both semesters. T, F, at 4:00. Assistant Professor Stanton and assistants.

B3 and B4. GYMNASTICS. (1 hour each.) A continuation of Gymnastics A1 and A2, with lectures on hygiene.

ired, Sophomore year, both semesters. T, F, at 5:00.
 tant Professor Stanton and assistant.

and C6. SPORTS. ($\frac{1}{2}$ hour each.) Two periods of
 or exercise in games or other exercises to be elected
 he student in consultation with the director, with lec-
 on social hygiene. Required, Junior year, both semes-
 T, F, at 5:00. Assistant Professor Stanton.

and C8. SPORTS. ($\frac{1}{2}$ hour each.) Two periods of
 or exercise in games or walking as in C5 and C6, with
 res on hygiene as related to heredity and eugenics.
 ired, Senior year, both semesters. T, F, at 5:00. As-
 nt Professor Stanton.

WOMEN

e Department is at once educative and practical in its
 , endeavoring not only to correct abnormalities of struc-
 and function, but to prevent their occurrence. Physi-
 and medical examinations are required of all entering
 ents; the physical examination is repeated at the end
 he year.

1 and A12. GYMNASIUM PRACTICE. (1 hour each.) Two
 ods of gymnasium work; from Thanksgiving to May 1.
 periods of outdoor sports, elected by the student sub-
 to the approval of the director; from October 1 to June
 Required, Freshman year. M, Th, at 3:00, or M, Th, at
 . Assistant Professor Squire and Miss Roof.

13 and B14. GYMNASIUM PRACTICE. (1 hour each.) A
 inuation of A11 and A12. Two periods, following the
 eral arrangement of A11 and A12. Required, Sophomore
 . M, Th, at 5:00. Assistant Professor Squire and Miss
 f.

15 and C16. SPORTS. ($\frac{1}{2}$ hour each.) Two periods of
 oor sports elected by the student, subject to the ap-
 val of the director; from October 1 to June 1. Junior
 . Assistant Professor Squire and assistant.

C17 and C18. SPORTS. ($\frac{1}{2}$ hour each.) Two periods of outdoor sports as in C15 and C16, with lectures on hygiene as related to heredity and eugenics. Senior year. Assistant Professor Squire and assistant.

B19 and B20. FOLK AND NATIONAL DANCING. ($\frac{1}{2}$ hour each.) One period; from Thanksgiving to May 1. Elective for Freshmen and Sophomores. Assistant Professor Squire.

C21 and C22. FOLK AND NATIONAL DANCING. ($\frac{1}{2}$ hour each.) One period; from Thanksgiving to May 1. Prerequisites: Physical Education B19 and B20 or their equivalent. Elective for Sophomores, Juniors and Seniors. Assistant Professor Squire.

C23 and C24. AESTHETIC DANCING. ($\frac{1}{2}$ hour each.) One period; from Thanksgiving to May 1. Prerequisites: Physical Education C21 and C22 or their equivalent. Elective for Juniors and Seniors. Assistant Professor Squire.

C25 and C26. GYMNASIUM PRACTICE. ($\frac{1}{2}$ hour each.) One period; from Thanksgiving to May 1. Prerequisites: Physical Education A11 and A12, B13 and B14 or their equivalent. Elective for Juniors and Seniors. Assistant Professor Squire and assistant.

Forty minutes constitutes a period. B19 and B20, C21 and C22, C23 and C24, C25 and C26, or Swimming may be substituted for one period of out-door exercise. Hours and credits given for these courses may not be used in the requirements for graduation.

III. History, Social Sciences and Philosophy

History and Constitutional History

HISTORY

A7. ENGLISH HISTORY TO 1603. (3 hours.) An introductory course, in which emphasis is laid upon the use of sources and methods of historical work. Freshman year, two divisions, first semester. T, Th, S, at 9:30, or at 11:15. Professor White.

A8. ENGLISH HISTORY SINCE 1603. (3 hours.) A continuation of History A7, with similar aims and methods. Freshman year, two divisions, second semester. T, Th, S, at 9:30, or at 11:15. Professor White.

A13 and A14. ANCIENT CLASSICAL HISTORY. (3 hours each.) A history of more recent archeological investigation in the general field of ancient history. M, at 1:00; W, F, at 7:30. Professor Stearns.

B1. MEDIEVAL HISTORY. (3 hours.) From the fall of Rome to the Renaissance. Lectures on the use of sources supplemented by practice work serve to introduce the student to modern historical methods. Sophomore year, first semester. T, Th, S, at 7:30. Professor White.

B2. THE RENAISSANCE AND REFORMATION. (3 hours.) From the fourteenth century to the reign of Louis XIV. Special attention is paid to the lives and writings of the great leaders of that period. Sophomore year, second semester. T, Th, S, at 7:30. Professor White.

B21 and B22. ANCIENT ORIENTAL HISTORY. (3 hours each.) The beginnings of the earliest civilization and its development in Babylonia, Assyria, Egypt, Persia and Palestine. Sophomore year, both semesters. M, at 2:00; W, F, at 8:30. Professor Stearns.

C3. EUROPE IN THE EIGHTEENTH CENTURY. (3 hours.) Prerequisite: A course in English or Medieval history. This may be taken as a D course, in which case additional work will be required. Junior and Senior years, first semester. M, W, F, at 11:15. Professor White.

D4. EUROPE IN THE NINETEENTH CENTURY. (3 hours.) Prerequisite: History C3 or D3. Junior and Senior years, second semester. M, W, F, at 11:15. Professor White.

D5 and D6. AMERICAN SOCIAL AND POLITICAL HISTORY. (3 hours each.) Lectures will be given on the Westward movement of the American people, the development of our social and political institutions, and the history of political parties. The class makes careful studies of certain important topics. Prerequisite: A course in American History. Junior and Senior years, first and second semesters. (Not given in 1915-1916.) Professor White.

C15. MODERN ASIATIC HISTORY. (3 hours.) A study of the later life and institutions, chiefly of China and Japan, the changes under Western influences, and the various relations of Asia with America and Europe. If taken as a D course, additional work is required. Prerequisite: A course in English, Medieval or American History. Junior and Senior years, first semester. M, at 9:30; W, F, at 3:00. Professor White.

D16. HISTORY OF SPANISH AMERICA. (3 hours.) Through lectures and collateral reading, a study is made of the life, the social and political institutions, the economic development and the relations with Europe and America of the principal Spanish-American countries. Prerequisite: A course in English, Medieval or American History. Junior and Senior years, second semester. M, at 9:30; W, F, at 3:00. Professor White.

For courses in Hebrew History, Early Christian History, History of Religion and History of Christianity, see under the Department of Biblical Literature.

CONSTITUTIONAL HISTORY

C9 and D10. COMPARATIVE CONSTITUTIONAL HISTORY. (3 hours each.) With the English Constitution as a basis, comparison of the constitutions of European and American states is made. This gives a fair knowledge of present-day governments. Junior and Senior years, both semesters. Not given in 1915-1916.) Professor Neely.

C11 and D12. AMERICAN CONSTITUTIONAL HISTORY. (3 hours each.) In this course the principles of constitutional law are taught, constitutional questions discussed and constitutional cases examined. Prerequisite: A course in American History. Junior and Senior years, both semesters. T, S, at 8:30. Professor Neely.

LAW

C1 and B2. ELEMENTARY LAW. (3 hours each.) This course treats of the sources of law, common law, equity. A text book is used, also reported cases, combining the "text book method" with the "case system" of teaching law. Junior and Senior years, both semesters. M, at 1:00; W, F, at 10:00. Professor Neely.

C3 and C4. ELEMENTARY LAW AND CONTRACTS, PLEADING AND EVIDENCE. (3 hours each.) This course treats of the principles of common law, contracts, chancery, and code pleading by text books and from reported cases. Students are required to prepare written pleadings for examination, criticism and marking. Junior and Senior years, both semesters. T, Th, S, at 9:30. Professor Neely.

C17. AMERICAN DIPLOMACY. (3 hours.) A study is made in this course of the history of the foreign relations of the American Colonies under the Continental Congress, and an examination of the important treaties of the United States. Establishment, organization and history of the Department of State. Junior and Senior years, first semester. T, at 8:30; W, F, at 2:00. Professor Neely.

D18. INTERNATIONAL LAW. (3 hours.) In this course a study is made of the principles and rules of law that have been adopted for the conduct of international affairs by consenting nations. Junior and Senior years, second semester. M, at 8:30; W, F, at 2:00. Professor Neely.

ECONOMICS AND SOCIOLOGY

B1 and B2. INTRODUCTION TO ECONOMICS. (3 hours each.) An elementary course which covers the entire field. Conducted for those desiring a general knowledge of the subject, it lays the foundation for specialization in the department. Sophomore and Junior years, both semesters. M, at 1:00; W, F, at 7:30, or M, W, F, at 11:15. Professor Sumner and Mr. Brandt.

B3. PRINCIPLES OF ECONOMICS. (3 hours.) A rapid survey of the field covered in Economics B1 and B2, intended to meet the needs of mature students, particularly those specializing in other fields. Junior and Senior years, first semester. T, Th, S, at 11:15. Professor Sumner and Mr. Brandt.

C5. MONEY AND BANKING. (3 hours.) The history and theory of money and banking, especially in their bearing on the practical problems of today. Prerequisite: Economics B1 and B2 or B3. Junior and Senior years, first semester. M, at 2:00; W, F, at 8:30. Professor Sumner and Mr. Brandt.

C6. PUBLIC FINANCE. (3 hours.) A study of taxation and other methods of meeting governmental expenditures in the light of both theory and practice. The budget, local and national taxation, and public debts are among the subjects taken up. Prerequisite: Economics C5. Junior and Senior years, second semester. M, at 2:00; W, F, at 8:30. Professor Sumner and Mr. Brandt.

D7. CORPORATION ECONOMICS. (3 hours.) A study of the growth of modern methods of large scale production and distribution. The benefits and dangers of monopolies and

trusts. Pools, trusts, and other forms of combination considered, together with plans for their regulation. Junior and Senior years, first semester. M, at 3:00, W, F, at 9:30. Professor Sumner.

18. PROBLEMS OF LABOR. (3 hours.) The factory system, modern organization of labor, woman and child labor, labor legislation, workingmen's insurance, and other appropriate problems. Prerequisite: Economics B1 or B3. Junior and Senior years, second semester. (Not given in 1915-16.) Professor Sumner.

19. TRANSPORTATION. (3 hours.) A study of the principal problems involved in securing and regulating the land and water transportation of the United States. Normally follows Economics D7. Junior and Senior years, second semester. M, at 3:00; W, F, at 9:30. Professor Sumner.

20. APPLIED SOCIOLOGY. (1 hour each.) The course consists of first-hand study of local industrial and social problems, together with the reading and discussion of the latest literature treating of these subjects. Senior and Junior years, both semesters. Hour to be arranged. Professor Sumner and Mr. Brandt.

21. ELEMENTS OF SOCIOLOGY. (3 hours each.) The development of society, its functions, institutions and customs. Illustrations are drawn from primitive society as well as from the America of today. Sophomore and Junior years, both semesters. T, Th, S, at 9:30. Professor Sumner and Mr. Brandt.

22. POOR RELIEF. (3 hours.) An examination of the causes of pauperism and their remedy, the obligation of society and the methods of relief. Prerequisites: Sociology B1 and B22, or Economics B1 and B2 or B3. Junior and Senior years, first semester. T, Th, S, at 7:30. Professor Sumner and Mr. Brandt.

23. CRIMINOLOGY. (3 hours.) A study of crime from the social point of view, including its cause and the treatment of the criminal. Normally follows Economics C25.

Junior and Senior years, second semester. T, Th, S, at 7:30. Professor Neely.

D27. THEORIES OF SOCIAL REFORM. (3 hours.) From Plato's Republic to Modern Socialism. The principal schemes, Utopian and scientific, for the radical change of social organizations. Prerequisites: Economics B21 and B22 and B1 and B2 or B3. Junior and Senior years, first semester. T, Th, S, at 8:30. Professor Sumner.

C28. CITY PROBLEMS. (3 hours.) The chief social and economic problems incident to modern city life. In addition to the general class work, each student is required to select some problem for special investigation. Prerequisites: Economics B1 or B3 or B21. Junior and Senior years, second semester. T, Th, S, at 11:15. Professor Sumner.

D30. IMMIGRATION. (3 hours.) A study of the cause and effects of immigration. Special emphasis is given to the present-day American issues. Junior and Senior years, second semester. T, Th, S, at 8:30. Professor Sumner.

Philosophy

PSYCHOLOGY AND EDUCATION

B1. ELEMENTS OF PSYCHOLOGY. (3 hours.) Intended to give the student a general view of the field of psychology, its aims, methods, values, relations, and its application to practical conduct. Class and individual experiments to illustrate and supplement the text. Text-book, lectures, recitations and laboratory work. Required in all courses. Sophomore and Junior years, two divisions, first semester. M, at 2:00; W, F, at 8:30; or M, at 3:00; W, F, at 9:30. Assistant Professor Hughes.

B2. PSYCHOLOGY. (3 hours.) Same as Psychology B1. Second semester. M, at 3:00; W, F, at 9:30. Assistant Professor Hughes.

B3 and C4. PRINCIPLES OF PSYCHOLOGY. (3 hours each.) This course is intended for those students who desire a more extended study of psychology along the lines of B1 or B2.

the emphasis is laid upon the comparative study of different systems, upon individual experiment and class demonstration. Text-book, lectures, recitations, and laboratory work. Those who take this course fulfill the three-hour requirement in Psychology and get three hours in addition. Sophomore and Junior years, both semesters. T, Th, S, at 9:30. Assistant Professor Hughes.

3. ADVANCED PSYCHOLOGY. (3 hours.) Designed to give the student a more intimate knowledge of the more important problems of modern psychology in its varying branches. Some of the problems discussed are those in general psychology, abnormal psychology, animal psychology, psychotherapy and educational psychology. Lectures, outlines, readings, reviews and theses. Intended for those planning to enter the professions of teaching, medicine, law and ministry. Prerequisite: Psychology B1 and B2. Junior and Senior years, second semester. M, at 2:00; W, F, at 9:30. Assistant Professor Hughes.

7. EDUCATIONAL PSYCHOLOGY. (3 hours.) A course in the practical application of psychology to the educative process, the theories of the functions of education and the principles which govern the educative procedure. The topics are treated in the light of modern psychological and physiological investigations, and the course is intended for those going into the professions of teaching, medicine, law and the ministry. Bagley's *Educative Process*, lectures and assigned readings. Prerequisite: Philosophy B1. Junior and Senior years, first semester. T, Th, S, at 9:30. Assistant Professor Hughes.

8. HISTORY OF EDUCATION. (3 hours.) A continuation of Psychology C7. An historical and critical treatment of the methods and ideals of the Greek, Roman and modern educational systems. Text-book and assigned readings. Junior and Senior years, second semester. T, Th, S, at 9:30. Assistant Professor Hughes.

PHILOSOPHY

B21. LOGIC. (3 hours.) The course is designed to be an introduction to the essentials of reasoning. Stress is upon exercises in logical construction, the detection of fallacies, and upon conception and classification. Induction and deduction in their relations, as employed in scientific research. Text, recitations, lectures and written assignments. Sophomore and Junior years, first semester. M, 2:00; W, F, at 8:30. Professor Parker.

B23. THE ELEMENTS OF ETHICS. (3 hours.) The origin and development of moral ideas. The relation of the ideas and of their development to civilization, with especial reference to their bearing upon the relation of the individual to society. The problems considered are those of goodness, evil, duty, freedom, conscience, the nature of the self, and the supreme good. Lectures, required readings and thesis. Prerequisite: Psychology B1 or B2. Required of all taking Philosophy C32. Junior year, first semester. T, W, S, at 8:30. Professor Parker.

B24. THE ELEMENTS OF ETHICS. (3 hours.) Same as Philosophy B23. Sophomore and Junior years, second semester. M, at 3:00; W, F, at 9:30. Professor Parker.

C25. ANCIENT AND MEDIEVAL PHILOSOPHY. (3 hours.) Lectures, readings of fragments of early Greek philosophy and selected readings from the writings of Plato and Aristotle. An extended thesis treating of some fundamental problem of ancient philosophy. Text, Rogers' "A Student History of Philosophy." Junior and Senior years, first semester. T, Th, S, at 11:15. Professor Parker.

C26. MODERN PHILOSOPHY. (3 hours.) Lectures, and readings from Descartes, Leibniz, Locke, Hume, and Kant. A thesis dealing with some modern philosophical problem required. Rogers' text. Rand's "Classical Philosophers." Reference is made to Royce's "The Spirit of Modern Philosophy," and to Calkin's "The Persistent Problems of Philosophy." Junior and Senior years, second semester. T, T, S, at 11:15. Professor Parker.

032. THE PRINCIPLES OF ETHICS. (3 hours.) A course designed for more advanced students of philosophy. May be substituted for Philosophy B23 by those students who make Philosophy their major, and likewise by other students of approved preparation. May also be taken as an elective by students who have completed B23 with A grade. Lectures and theses. Junior and Senior years, second semester. M, T, Th, S, at 8:30. Professor Parker.

In keeping with the requirements of those who plan to become graduate students of Philosophy, certain courses are offered, one each semester, in which the spirit of independent research is encouraged, and methods of specialized study within certain limits employed. Except by consent of the department, registration in these courses is limited to students whose major is Philosophy. Prerequisites: Nine hours of Philosophy and Psychology, including C25 and C26.

027. INTRODUCTION TO PHILOSOPHY. (3 hours.) The course is designed to familiarize the student with the outlines, divisions and methods of procedure in the several branches of philosophical inquiry. Junior and Senior years, first semester. M, T, Th, at 4:00. Professor Parker.

028. METAPHYSICS. (3 hours.) An inquiry for the fundamental conceptions of philosophy. Junior and Senior years, second semester. M, T, Th, at 4:00. Professor Parker.

029. PHILOSOPHY OF RELIGION. (3 hours.) The origin and nature of religion. Its development as a corollary of civilization through stages approaching to the level of revelation and redemption. These stages considered with especial reference to their illustration by the religion of Israel and its culmination in Christianity. Junior and Senior years, first semester. (Not given in 1915-1916.) Professor Parker.

030. MODERN PHILOSOPHICAL PROBLEMS. (3 hours.) An effort to state the prominent tendencies in present-day thinking, and to relate them to their proper historical sources. Junior and Senior years, second semester. (Not given in 1915-1916.) Professor Parker.

STUDENTS

The register of students is made up at the beginning of the second semester.

Freshmen whose entrance units have been accepted and who have carried the work of the first semester satisfactorily are placed in the first list; the others in the second. In respect to other classes, those are placed in the first list who are matriculated and who do not fall short more than six hours and six credits of the necessary hours and credits required at the middle of the year for which they are registered; all others in the second list.

The standing of students enrolled for less than one semester is provisional.

GRADUATE STUDENTS

Mary Edna Lochridge	.....	Long Beach
<i>B.A., Pomona College, Fellow in Philosophy</i>		
Paul Adams	.....	Pomona
<i>B.A., Pomona College</i>		
Marguerite Boardman	.....	Claremont
<i>B.A., Wellesley College</i>		
Robert Bruce Findlay	.....	Pomona
<i>B.A., Parsons College</i>		
Katharine Alma Hoskins	.....	Claremont
<i>B.A., Pomona College</i>		
Paul Houghton	.....	Claremont
<i>Ph.B., University of Iowa</i>		
Ernest Everett Jones	.....	Claremont
<i>B.S., Pomona College</i>		
Katharine Isabel Jones	.....	Etiwanda
<i>B.A., Pomona College</i>		
Margaret Metcalf	.....	Claremont
<i>B.A., Pomona College</i>		
Edith Elvira McConnell	.....	Claremont
<i>B.A., Pomona College</i>		
<i>M.S., University of California</i>		
Stuart Luther Peck	.....	Claremont
<i>B.S., Pomona College</i>		
Alfred Oswald Woodford	.....	Claremont
<i>B.A., Pomona College</i>		

SENIOR CLASS

riet Ellen Allison	Santa Ana
na Andrews	Santa Ana
ge Babcock	Pomona
ys Vivian Banks	San Dimas
a Anne Beatty	Santa Ana
alden Bennett	Redlands
ncene Lewise Bishop	Long Beach
est Wilton Bougher	San Diego
erta Burden	Claremont
thia Lynette Burnell	Claremont
Delbert Cate	Long Beach
me Ethel Church	Pomona
h Lathrop Clary	Regina, Canada
e Margaret Clausen	Santa Ana
Mildred Clency	Claremont
el Augusta Converse	Claremont
hen Adelbert Craig	Upland
a Huntington Culver	Long Beach
l Rodney Daggs	Claremont
en Brown deCamp	Claremont
e Thorburn deCamp	Claremont
h Eakin	Claremont
a Emilie Edgar	Claremont
iel Dana Emerson	Prescott, Arizona
ncis Charles Flint	Long Beach
y Hazel Hamilton	Pasadena
lie Violet Hess	Upland
en Winifred Hill	Claremont
est Gockley Hoff	Maywood, Illinois
ence Twitchell Holme	Los Angeles
t Rice Hopkins	Tulare
ce Alice Hoskins	Pasadena
liam Ewart Hudson	Alhambra
en Harmon Humphrey	Claremont
eda Johanna Iselin	Banning
ph Patterson James	Redlands
ter Jewell	San Dimas
a Martha Kingsbury	Hemet
lin Jerome LaFollette	Highland
vin Munderloh Landale	Omaha, Nebraska
th Winifred Lee	Pomona
vard Payson Marsh	Claremont
nces Havergal Marsh	Escondido
en Marguerite McIlvried	Pomona
liam Gammon Metz	Sheridan, Wyoming

Ruth Eleanor Milliken	Claremo
Margaret Lyons Moles	Claremo
Charlotte Neely	Claremo
Courtenay Stuyvesant Overin	Los Ange
Amy Pefley	Claremo
Byron Stevens Phillips	Pasada
Nettie Elsey Pike	Long Be
Archie Goodrich Postlethwait	Corry,
Ethel Irene Prosser	Pasada
Walter Seaton Reeves	Santa A
Hero Excelsior Rensch	Pasada
Adah Rogers	Pomo
Barbara Stevens Sanford	Claremo
Queenie Santikian	Fow
Ellis Savory	Claremo
Marian Easter Skinner	San Bernard
Helen Whipple Smith	Claremo
Herbert Spoor	Redlar
Roy Ables Stewart	San Bernard
Chi Tsau Wang	Soochow, Chi
Nannie Evelyn Weed	Claremo
Carl Irving Wheat	Los Ange
Peter J. Wiebe	Lordsbu
Margaret Dorothy Wilcox	Lamanda Pa
Gladys Wilson	Pomo
Mary Lillian Woodford	Claremo

William Perkins Channon	Oberlin, Ol
Loyd Otterman Cooper	Burba
Claude Craft	Elsinc
John Baker Durkee	San Dim
Colvin Heath	Pomo
Florence Wheat Hoover	Claremo
Emma Ruth Matheson	Glendo
Valentine Johnson Powelson	Tacoma, Was
Voyle Dixon Rector	Omaha, Nebras
Birdenia Elizabeth Smith	Claremo

JUNIOR CLASS

Constance Abbott	Claremo
Julia Lillias Andrews	Upland
Augusta Elizabeth Berg	San Die
Susie Jeanette Billington	Upland
Paul Carrier Blaisdell	Claremo
Helen Lucille Brayton	Long Bea
Hazel Brewer	Pomona

Strude Hazel Bristol	Claremont
Se Ludowick Cobb	Tulare
thur Kirkpatrick Cobb	Tulare
anklin Cogswell	Pomona
coline Whitehouse Coleman	Pasadena
lena Frances Curtiss	Lordsburg
ederick William Davies	Los Angeles
red Woodward Dodge	Santa Barbara
rnice Katherine Franklin	Carpinteria
ma Mary Freeman	Pasadena
e Margaret Freeman	Upland
n Lloyd Gardner	Claremont
rence Sherman Gillett	Claremont
ythe Alice Graves	Whittier
rjorie Elizabeth Griffin	Whittier
lliam Ferguson Hamilton	Orosi
ith Helen Hartley	Upland
en Franklin Hawley	San Diego
rence Hield	Armada
ra David Hoge	Pasadena
rley Frank Howe	Chula Vista
sly Boyd King	Covina
len Anna Lane	Pomona
ul Adolph Lichti	Cucamonga
un Frederic Loba, Jr.	Ontario
y Clark Marchant	San Dimas
na Martin	Claremont
ry Ruth McLaughlin	South Pasadena
rl Clifton Mead	Claremont
D Mehl	Upland
en Jewett Merritt	South Pasadena
orge Emmett Raitt	Porterville
lablanche Robe	Pueblo, Colo.
orge P. Schooling	Warrensburg, Mo.
dian Marie Pauline Schulz	Upland
ry Margaret Seeley	Covina
ry Alice Sharps	Upland
lla Sloan	San Bernardino
therine Smiley	Orange
ice Maybelle Stafford	Corona
drew Acker Sugg	Claremont
ester Noyes Thompson	Highland
an Thompson	Highland
oy Rita Vaughan	Claremont
ank Marion Watenpugh	Ontario
thur Fairchild White	Claremont

Mary Cordelia White	San Dim
Clara Malvina Williams	Portervi
Harriet Holcomb Windrem	Pomo
Marjorie Burton Woodford	Claremo
Frances Yeomans	Long Bea
Harold John Burt	Upland
Margery Carpenter	Hem
Hazen Graves Chamberlin	Ischua, N.
Theodore Hamilton Coke	Down
Fred Austin Cox	Holtvil
Juliet Dixon	Hanfor
Paul Frantz Dresher	Lordsbur
Ruth Frantz	Lordsbur
Pauline Christine Jahraus	Laguna Bea
Mildred Lavinia Jones	Salt Lake City, Uta
John Lamont McFadden	Santa Ar
Marguerite Parsons	Claremor
Katherine Virginia Sinks	San Dieg
Vesta Marie Slaughter	Pomor
Gretchen Virginia Smith	Claremor
Joseph Robert Sperl	Pomor
Katherine Stein	Long Bea
David Sturges	Claremor
Louise Walker	Pomor
Cyril Harvey Warren	Escondid
Glenn Baird Wilkins	Claremor
*Jeannette Williams	Pomor
Marguerite Arthelda Young	Claremor

SOPHOMORE CLASS

Ethel Pauline Allen	Claremor
Jessie Moultrie Allott	Alliance, C
Jean Armstrong	Phoenix, Ari
Henry Reavis Barcus	Pomor
James Bell Baxter	Claremor
William Samuel Belden	Alta Lom
Wayne LeRoy Bell	Claremor
Marianne Elizabeth Bidelman	Los Angele
Ada Alberta Black	Santa An
Jesse Christian Brandt	Lordsbur
Clarence Wilbur Brock	Pomor
Harold Delbert Brown	El Mont
Winifred Estelle Bullock	River
Mary Dorcas Butman	Whittie

*New students entering second semester.

by Catherine Campbell	Orange
ry Ruth Carothers	Pomona
rgaret Cate	Florence
th Caroline Chamberlin	Ischua, N. Y.
ner Shryack Clark	Claremont
lla Valerie Coleman	Pomona
rriet Mosher Coman	Covina
no Hanford Conley	El Centro
ce Beulah Cranston	Santa Ana
y Frederick Cromer	Upland
bert Neil Dangerfield	Riverside
n Murray Davison	Riverside
bel Clair Day	Claremont
ohie Lois Doane	San Diego
rguerite Dodd	Pomona
rence Mildred Dodge	Claremont
ul McClean Dowling	Fullerton
rion Elizabeth Drown	Nordhoff
ymond Morgan Elliott	Anaheim
th Emily Epling	Lordsburg
rgaret Edith Faires	Claremont
ce Allyn Findlay	Los Angeles
th Fountain	Banning
chel Sarah Fryer	Claremont
lla Gammon	Pasadena
ra Gammon	Pasadena
rroll Eugene Genung	Pomona
mund Sheldon Gerry	Ventura
ison Bryce Given	Covina
lena May Goodale	Anaheim
lliam Marshall Greathouse	Santa Ana
ith Amy Green	Pasadena
orge William Green	Long Beach
rrie Gladys Grimes	Pasadena
ward Tisdale Gushee	Ontario
len Felicitas Haury	Upland
rold Coy Haymond	Pasadena
is Townsend Hiatt	Ceres
n Elizabeth Houghton	Rivera
na Esther Ingels	Fresno
n Baxter Jouvenat, Jr.	Sheridan, Wyo.
rjorie Rood Kennedy	Pomona
na Loftus	Whittier
pha Lorbeer	Pomona
n Lomax Love	Long Beach
bel Mansur	Santa Ana

Hazel Leone Maurer	Los Angel
Hazel Avis McClees	Claremo
Clara Belle McConnell	Claremo
Frank Dole McCulloch	Upland
Lois Applegate McLaughlin	Lamanda Pa
Dorothy Neely	Claremo
Faustina Nenno	Fullerton
Clara Belle Nielsen	Monrovi
Eleanor Okell	Norwalc
Charles Eddy Orcutt	National Ci
Margaret DeMotte Overholtzer	Claremo
Wesley Lee Paul	Glendora
Lewis Clifford Plush	Pomona
Lowell Clark Pratt	Pomona
James Lee Pride	Pomona
Elsie Ann Randall	Whittier
William Harold Rapson	Claremo
Anna Belle Robinson	Claremo
Warren Sumner Rogers	Los Angel
Paul Edward Schwab	Ontario
Dorothy Ashton Shade	Rock Rapids, Iowa
Katherine Crowell Sharpless	Perris
Carl Shepard	Compton
Earle Valentine Skinner	San Bernardino
Mary Isabel Smiley	Orange
Amelia Ora Smith	Claremo
Georgia Victoria Smith	Santa Ana
Mabel Ayretta Stanford	Claremo
Anna Abigail Stewart	Claremo
Helen Hope Sturges	Claremo
Walter Eugene Coe Sturges	Claremo
Elizabeth Hayden Taylor	Ontario
Mabel Louise Tubbs	Tustin
Jerome Bonaparte Walden	Claremo
Richard Carlisle Waltz	Ontario
Marion Skinner Warren	Covina
Paul Edward Webb	Pomona
James David Weinland	Banning
Florence Ione Wilson	Artesia
Florence Mary Wilson	Los Angeles
Elsie Katharine Wingood	Santa Ana
Lola May Wire	Chino
John Dick Young	San Bernardino

ey Eustathius Alimisis	Ontario
Gladys Bailard	Carpinteria
Faye Beaty	Paso Robles
hardt Louis Bergstrom	El Monte
e Marguerite Bolton	Long Beach
Parsons Campbell	San Dimas
nce Marie Case	Pomona
Han Chen	Canton, China
Maud Cornell	Long Beach
Marie Craig	Pomona
um Harold Cree	Claremont
Marshall Fox	San Diego
s Helen Fritz	Redondo Beach
rie Harris	Pomona
es Rupert Hartshorn	Holtville
e Evelyn Harvey	Upland
erick Hastings	Claremont
y Louise Haworth	Los Angeles
am Herbert Humphrey	Escondido
e Hubbard Johnson	Ontario
ence Anna Johnson	Ontario
er Harold Johnson	Pomona
asaku Katayama	Marugame, Japan
et Loring Keyes	Claremont
ge Gaylord Kirkpatrick	Pomona
ard Arthur Krause	Anaheim
ey Anne McClees	Claremont
a Camp McDonald	Pasadena
Myers	Compton
d Grace Pine	Corona
ar Kelley Reid	Banning
Warner Robinson	Dinuba
a Pauline Sears	Porterville
orie Isabelle Shaw	Claremont
er Edgar Stafford	Santa Ana
y E. Staples	Chicago
ort Lars Stensgaard	Pomona
ge Walton Stickney	Upland
la Louise Taylor	El Monte
sn Gertrude Tracy	Claremont
yTrussell, Jr.	Escondido
vieve Newman Vredenburg	Chino
ld Ramsey Youngman	Santa Ana

ceased.

new students entering second semester.

FRESHMAN CLASS

Hollis Partridge Allen	Pasa
Mabel Allen	Clare
June Andrews	Rigby, I
Cheerful Hyacinth Apple	El Ce
Rodney Fremont Atsatt	Los Ang
Edith Sophia Avison	Long B
Paul Wilton Barton	Fairbault, M
Robert Rowe Benson	Grainfield, Ka
Ruth Benson	Ora
Edwin Frisbie Birdsall	Co
Margaret Winslow Bixby	Long B
Frederick Sumner Brackett	Clarer
Catherine Helen Bradshaw	Ora
Henry Levi Bray	
Irene Lucille Brooks	El Ce
Lenabelle Cannon	Ven
Donald Edward Clark	Santa Mo
Louisa Lewis Clark	Oberlin, O
Heber Hovey Clewett	Pom
William Thomas Melvin Cook	C
Helen Laura Cowles	Camp
Rebekah Taylor Crabtree	San D
Clyde Edward Crawford	Wildo
Horace Willard Cutler	Pasac
Helen Inez Daley	San Bernar
Alice Dorothy Daniels	River
Esther Coyne Daniels	River
Mary Alling Davies	Los Ang
Fern Dow	Redla
Aileen Lois Drobish	River
Ruth Marie Duncan	Upl
Marafred Carolyn Durant	Claren
Alma Celia Evans	Pom
Harold Raymond Eyer	Up
Dorothy Fellows	Pom
Mary-Stuart Fox	Pom
William Laurence Gantz	Pom
Archibald Maclay Gardner	Whit
Judith Margaret Garrison	St. Louis,
Gladys Gervais	Anah
Edward Martin Gibbs	Long Be
Katherine Gilbert	Long Be
Mable Gladys Girton	Ora
Allen Smith Grover	San Jaci
Walter Lowrie Grow	Highl

e Hendrie Grubb	Santa Ana
rt Morrison Hager	Claremont
Emily Hall	Pomona
s Eddy Hamilton	Orosi
le Hamilton	Claremont
s Ida Hammond	Covina
orie Dayton Hitchcock	Pasadena
id Erwin Ingham	Claremont
r Joy Jameson	Corona
Marian Jenkins	Ontario
lotte Mary Johnson	South Pasadena
. Jones	Pomona
e Jones	Long Beach
us Paine Jones	Harwich, Mass.
aret May Jones	Whittier
ert Raymond Kendall	Santa Ana
in Royal King	Claremont
n Anna King	Pasadena
n Kingman	Claremont
s Leek	Claremont
Leek	Claremont
n Linn	Santa Ana
ert Charles McCulloch	Upland
lotte Elizabeth McGee	Pasadena
orie Leslie McKillop	Silverdale, Wash.
Vera Mehl	Upland
va Evadne Miller	Pasadena
e Miller	Pomona
r Miller	Ontario
Weber Mitchell	Ontario
thy Montgomery	Marshall, Mo.
ette Marguerite Nickey	Long Beach
s Nisbet	Pomona
le Geneva Nisson	Santa Ana
rnice Edwin Noonan	Ontario
a Mary Osler	Pomona
Lorene Peck	Pomona
k Leon Pellissier	Whittier
aret Pendergast	Carpinteria
e Louise Perry	Pomona
le Gladys Pine	Corona
n Powell	Claremont
Marie Randall	Highland
n Bertha Reinhaus	Santa Ana
les Sumner Reynolds	Upland
er Mark Robbins	Bangor, Mich.

Margaret Nealley Roy	Santa
Eleanor Sargent	Up
Susan Jane Shedd	Los An
Phebe Sheldon	Ven
Katharine Sias	Co
Margaret Louise Siddall	South Pasad
Anna Katharine Skeelee	Los Ang
Clifford Frank Smith	Pom
Alma Jean Stelson	Clarem
Edmund Parker Stone	Pom
Ruth Utt	Clarem
Philip Everest Van Arnam	River
Bruce McClain Wallace	Santa
Raymond Morrison Wansley	San D
Evelyn Mae Weirick	Pom
Elwyn Haskell Welch	Pom
Edwin Pascal Whitney	Clarem
Emma May Wickersheim	Ora
Martha Hatch Winslow	Pasad
Madge Wire	Pom
Elizabeth Deshler Woodhouse	Pasad
Emanuel Paul Young	Clarem
Francyl Reseda Zumbro	River
Hazel Corinne Zumbro	River
Raymond Adkinson	El T
Paul Barber Anderson	Santa
DeGraff Austin	San D
Esther Baker	Pom
Mary Broughton Bell	Clarem
Samuel Benjamin Berry	Redla
Helen Dorothy Brush	Cov
Genevieve Burton	Pom
Doris Margaret Carver	Los Ang
Anna Marie Cole	Pasad
Clarence Cooper	Pom
William Howard Craig	Upl
Earle Clifford Dahlem	Alta Lo
Darsie Lloyd Darsie	Hollyw
Frank Audel Davis	Santa Ma
*Virginia Dearborn	Rivers
Ralph Emory Dickenson	Santa Pa
Jessie Dow	Redla
Julian Bryan Downey, Jr.	Clarem
Eugene Bailey Eaton	Rivers

*New students entering second semester.

Beatrice Eldred	San Diego
May Evans	Pasadena
Dwight Fansler	Philadelphia, Pa.
Vivian Farrar	Riverside
Mae Fitkin	Claremont
Lloyd Fletcher	San Fernando
Humphrey Fountain	Banning
McPherson Goodrich	Portland, Ore.
Nathan Green	Fair Haven, Mo.
Fitzgerald Hamilton	Redlands
Bennett Hamner	Corona
Harbour	Orange
Harrison	San Bernardino
Hartley	Upland
Dale Healy	Claremont
Jeffery Hill	Huntington Beach
Ivy Hill	Dinuba
Gould Hinton	Claremont
guerite Hiskey	Alta Loma
Jorie Hopkins	Pomona
Davis Hopkins	Pomona
Theresa Hornby	Burbank
Horne	Hollywood
Howe	Chula Vista
Humphrey	Claremont
Maye Hyde	Calexico
August Iselin	Casa Grande, Ariz.
Mary Jacobs	Pasadena
Clement Jenkins	Pomona
Jeanette Jenness	Long Beach
Lester Johnson	Los Angeles
Garet Johnston	Claremont
Jones	Pasadena
Ely Kennedy	Long Beach
Chase Kenyon	San Diego
Kerckhoff	Covina
Elizabeth Kerr	Santa Maria
Killian	El Monte
Mathews Kinney	Grants Pass, Ore.
Kirkpatrick	Pomona
Corita Logie	Redlands
Henrietta Lutz	Santa Ana
Salle Almeron Maynard	Claremont
Marie McGrann	Imperial
guerite Vivian Moe	Claremont

new students entering second semester

Benjamin Gunder Nordstrom	Kings
Ruth Olmstead	Por
Howard Greenwood Peacock	Por
Carroll Morris Powers	Minneapolis, M
George Floyd Rice	Enci
Clarence Starr Roberts	Por
*William Reid Rodgers	San Fran
Leah Wyoming Saviers	Santa P
Adeline Anna Schanel	El M
Ralph Shallenberger	Santa
Elizabeth Margaret Sheppard	On
Willard Rossiter Smart	Claren
Beatrice Smith	Up
Thomas Church Haskal Thacher	Norc
John Niehaus Trefzger	San D
*Ruth Angele Visel	Santa
Louise Walton	Lake
Robert Carlton Witter	Claren
*Elsie Mae Woehr	Claren
Marguerite Young	Sacram

SPECIAL STUDENTS

Martha Bentley Ackerman	Claren
Nelle Mae Ainsworth	Ora
Syvilla Bendixen	Springfield, M
Calvin Newton Burton	Pom
Dorothy May Elton	South Pasad
Jessie Alice Knox	Ocean F
Harold Ward Pfiffner	Fairmont, M
William Merritt Pinckney	Claren
Catherine Stephenson-Scott	Claren
Sophie Seymour Stearns	Claren
Emily S. M. Waite	Ravenna, C

*New students entering second semester.

STUDENTS IN MUSIC AND ART, NOT REGISTERED FOR
CREDIT

Ma Breakey	Covina
nce Marie Fox	La Mesa
Gapp	Pomona
s Ethel Geier	Claremont
leine Jones	Harwich, Mass.
elmina Kent	Pomona
r Olds	Pomona
, Perrin	Pomona
William L. Stanton	Glendora
ld W. Stilson	Corona

SUMMARY

uate Students	12
rs	81
rs	81
omores	146
men	200
al Students	11
al Music and Art Students.....	10
Total	541

DEGREES, HONORS AND PRIZES

Degrees Conferred in 1914

MASTER OF SCIENCE

IN ZOOLOGY

Gertrude Auld Bacon, Claremont
B. A., Pomona College

BACHELOR OF ARTS

Summa cum Laude

Kenneth Glendower Darling, Claremont
 Mary Edna Lochridge, Claremont

Magna cum Laude

Harry Alonzo Brandt, Lordsburg
 Ralph Dalton Cornell, Long Beach

Cum Laude

Bertha Harding Allen, Pasadena
 Eunice Atkinson, Los Angeles
 Holland Field Burr, Pomona
 Paul Armstrong Davies, Los Angeles
 Anna Lucile Elliott, Pomona
 Edith Marguerite Hitchcock, Claremont
 Winifred Rachel Hogan, Lancaster
 Josephine Elizabeth Jacks, Batavia, N. Y.
 Hugh Toland Jones, Pomona
 Katharine Loney Llewellyn, Pomona
 Margaret Painter, Glendora
 Catherine Fraser Snell, El Monte

Rite

Paul Adams, Pomona
 Henry William Berg, Reedley
 Voyle Ellsworth Brennen, Los Angeles
 Ruth Eunice Bullock, Redlands
 Sarah Avis Crook, Covina
 Helen Nina Davis, Pomona
 Freeman Morgan Eakin, Claremont
 Frederick Newton Edwards, Whittier
 Elizabeth Augusta Foss, Los Angeles
 Donald Frederic Fox, Pasadena
 Eleanor Frater, Pomona
 Marie Main Frost, Redlands

Ray Earl Gardner, Claremont
Ralph Emerson Gibson, Escondido
Albert Howard Hankey, Santa Ana
Katherine Alma Hoskins, Claremont
William Jewett Howard, Whittier
Marion Johnston, Claremont
Harry Lees Kingman, Claremont
Clara Petronella Kommers, National City
George Coe Lorbeer, Claremont
Sarah Elizabeth Lorbeer, Pomona
Vera Helen Lorbeer, Claremont
Mildred Harrison Mansur, Santa Ana
Elsie May McConnell, Claremont
Edwin Thomas McFadden, Santa Ana
Edith Elizabeth McGee, Whittier
Addie Lula Miller, Pomona
Helyn Belle Miller, Lordsburg
Mildred Katherine Murphy, Pasadena
Esther Marie Nielsen, Monrovia
Anna Marie Norris, Los Angeles
Ruth Catharina Peterson, Pomona
James Tank Porter, La Mesa
Nelle Marie Remsberg, Santa Ana
Theodore Johnson Rice, Pomona
Harold Joy Ryan, San Diego
Estella Marguerite Seaver, Pomona
Mary Ellen Shrode, Pomona
Reatha Ava Smith, Claremont
John Whiteley Snyder, San Diego
Roy Elmer St. Clair, Lordsburg
Earl Henry Weed, Claremont
George Fernando Weinland, Banning

BACHELOR OF SCIENCE

Cum Laude

Stuart Luther Peck, Claremont

Rite

George Henderson Ash, San Diego
Edward Crane Bangs, Santa Ana
Harold Welding Daniels, Claremont
Lawrence Birney Gillette, Claremont
Warren Benaiah James, Redlands
Alberta Tomlinson, Claremont
Charles Hiram Ward, San Dimas
Henry Newton Wolcott, Tombstone, Ariz.

Honors Awarded in 1914

GENERAL HONORS

Senior Class

(The numerals I and II denote respectively first and second semesters.)

Bertha Harding Allen I, II
Eunice Atkinson I, II
Harry Alonzo Brandt I, II
Holland Field Burr II
Ralph Dalton Cornell II
Paul Armstrong Davies I, II
Fred Newton Edwards I
Anna Lucile Elliott I, II
Elizabeth Augusta Foss I
Donald Frederic Fox I
Edith Marguerite Hitchcock II
Winifred Rachel Hogan I, II
Josephine Elizabeth Jacks II
Hugh Toland Jones I, II
Katharine Loney Llewellyn I
Mary Edna Lochridge I, II
Vera Helen Lorbeer II
Mildred Harrison Mansur II
Addie Lula Miller II
Anna Marie Norris I
Margaret Painter I, II
Ruth Catharina Peterson I, II
Catherine Fraser Snell I, II
Alberta Tomlinson I

Junior Class

Mary Frances Beck II
Hugh Lathrop Clary II
Bula Huntington Culver I, II
Helen Brown de Camp I
Irene Thorburn de Camp I
Ruth Eakin I
Hazel Hamilton I, II
Hallie Violet Hess I
Ernest Gockley Hoff I, II
Edwin Munderloh Landale I, II
Charlotte Neely I
Archie Goodrich Postlethwait I, II

Ellen Queen II
Adah Rogers I
Queenie Santikian I
Ellis Savory I
Joela Sharp I, II
Carl Irving Wheat II

Sophomore Class

Constance Abbott I, II
Florence Chase I
Alfred Woodward Dodge I, II
Mae Margaret Freeman II
Alma Emilie Edgar I
Clarence Sherman Gillett I, II
Marjorie Elizabeth Griffin I
Allen Franklin Hawley II
Pauline Christine Jahraus I, II
Olive Kuntz II
Eleanor Allen Lee I, II
Lydia Mangold I, II
Ruth Jeanette Powell I, II
Gladys Wilson I
Marjorie Burton Woodford I, II
Frances Yeomans I

Freshman Class

Henry Reavis Barcus I, II
Lina May Bartholomew I
Mary Faye Beaty I
Ada Alberta Black I, II
Elmo Hanford Conley II
Harold Enos Crowe I, II
Margaret Edith Faires II
Helena May Goodale II
Helen Felicitas Haury I, II
Edna Esther Ingels I
Marjorie Rood Kennedy II
Margaret DeMotte Overholtzer I, II
Zadie Hanna Saecker II
Selwyn Jackson Sharp II
Marcia Clarice Spear I
Maria Louisa Van Rensselaer II
Richard Carlisle Waltz II

DEPARTMENTAL HONORS

Senior Class

Bertha Harding Allen	Astronomy D7
Harry Alonzo Brandt	Economics C5, D7, D10
	English D5
	Philosophy C25
	Sociology C23
Holland Field Burr	Philosophy D28
Ralph Dalton Cornell	Art A2, C10
	Botany D24
	French B3
Kenneth Glendower Darling	French B3', B4'
	German D12
	Sociology C28
Ray Earl Gardner	Zoology D20
Winifred Rachel Hogan	English C28
Josephine Elizabeth Jacks	Law B1, B2
	Sociology B21, C22
Hugh Toland Jones	Physics B1
Katharine Loney Llewellyn	French C7'
	Sociology C23, D27
Mary Edna Lochridge	Astronomy D7
	Mathematics D27
	Philosophy C25, D26, D28
	Psychology C7
	Spanish A1, A2
Margaret Painter	Sociology D27
Ruth Catharina Peterson	Art B12
Catherine Fraser Snell	Art D8
Roy Elmer St. Clair	Zoology D16, C33
George Fernando Weinland	Psychology D8

Junior Class

Edna Anne Beatty	Sociology B21
	Spanish A1
Mary Frances Beck	German C10, C10'
Paul Carrier Blaisdell	Music A1, A2
Lois Mildred Clency	Botany C24
	Geology B2
	Sociology C28
Alma Emilie Edgar	Economics C8
	Sociology C28, B21
Ernest Gockley Hoff	Philosophy B24
Edwin Munderloh Landale	Philosophy D28, C25

Margaret Lyons Moles	Zoology D19
Del Irene Prosser	History B22
Len Queen	Applied Music
Alter Seaton Reeves	Chemistry D11
Is Savory	Sociology B21, B22
Ela Sharp	Economics B2
rl Irving Wheat	Philosophy B24
rold Richards Wilson	Philosophy B24

Sophomore Class

rold John Burt	Chemistry C8
	Music A2
argery Carpenter	Mathematics A5
azen Graves Chamberlin	Chemistry B5
orence Chase	Applied Music
rna William DeVana	Sociology C22
fred Woodward Dodge	Astronomy C3, D6
	History B1, B2
	Mathematics C18
	Physics C3, D4
ae Margaret Freeman	French D8
arence Sherman Gillett	Physiology B4
lith Helen Hartley	French B4
len Franklin Hawley	Chemistry C8, C15
ary Ruth McLaughlin	Music A2
uth Jeanette Powell	German B4
ma Clara Schowalter	Mathematics A1
ella Sloan	History B22
atherine Smiley	Chemistry B6
arjorie Burton Woodford	History A8
	Spanish A1

Freshman Class

Henry Reavis Barcus	Mathematics B7, B8
ary Faye Beaty	Freshman Bible
	English A2
da Alberta Black	Art A2
arold Enos Crowe	Biology A1
	Physics B1, B2
argaret Edith Faires	English A21
	Mathematics A3
ella Gammon	Art A2
arroll Eugene Genung	Engineering A2
dmund Sheldon Gerry	Chemistry B5

Helena May Goodale	Applied Music
Helen Felicitas Haury	Freshman Bible
	English A22
	French A2
Edna Esther Ingels	English A36
Marjorie Rood Kennedy	English A22
	French A1
Leo Joseph Klotz	Chemistry A1
John Clark Lewis	Engineering A2
Hazel Avis McClees	Mathematics B8
Lois Applegate McLaughlin	Art A2
Charles Eddy Orcutt	English A21, A22
Lewis Clifford Plush	Chemistry A1, B5
Alvin William Pruett	Zoology B18
Orrin Warner Robinson	English A36
Zadie Hanna Saecker	Freshman Bible
	English A22
Paul Edward Schwab	History A8
Selwyn Jackson Sharp	English A36
Katherine Crowell Sharpless	English A2
Amelia Ora Smith	English A2
Walter Stafford	Engineering A2
Mabel Ayretta Stanford	English A2
Maria Louisa Van Rensselaer	English A22
Paul Edward Webb	English A22
Elsie Katharine Wingood	Spanish C4
Lola May Wire	Spanish C4

Special Student

Eileen Tubbs	Art B4, C10
	Engineering A2

Prizes Awarded in 1914

THE HOME ORATORICAL CONTEST

Carl Irving Wheat
James Brooks Blaisdell

WOMEN'S ORATORICAL CONTEST

Queenie Santikian
Frances Marsh

THE CONDIT CONTEST IN EXTEMPORANEOUS ADDRESS

Edwin Munderloh Landale

THE DOLE DEBATE

Jean Frederic Loba, Jr.
Clarence Sherman Gillett

THE KINNEY DECLAMATION CONTEST

Barrett Carlisle Kiesling
Bruce Allyn Findlay

THE VAILE PRIZES (Not given)

THE MUDGE LATIN PRIZE (Not given)

THE LLEWELLYN BIXBY MATHEMATICS PRIZE

Alfred Woodward Dodge

THE MONCRIEFF PRIZE IN ASTRONOMY

Alfred Woodward Dodge

THE LORBEER PRIZES

Clarence Sherman Gillett
Leon Lloyd Gardner

SATURDAY

FRIDAY

THURSDAY

WEDNESDAY

TUESDAY

MONDAY

Math. I A5, A6
Math. A9, A10
Math. D27, D28
Philos. B21
Psychol. I B1, C6

Astron. C3, D6
Bible D25, C28 or
Bible C33, D42
Chem. C16
Econ. D7, D10
Eng. B23, C28
French II, A1, A2
Latin D11, D12
Math. A1, A2
Math. A3, A4
Math. II A5, A6
Psychol. II B1, B2
Philos. B24
Phys. Ed. I A11, A12

Phys. Ed. I A11, A12

Bible B3, B4
Germ. C9', C10'
Greek B3, B4
Hist. C15, D16
Italian B31, B32
Latin A3, A4
Music II A1, A2

Chem. B5, B6
Greek B3, B4
Hist. C15, D16
Italian B31, B32
Latin A3, A4
Music II A1, A2

Art B11, B12
Engin. D13, D14

Art B11, B12
Engin. D13, D14

Phys. Ed. A1, A2

3:00

HOURS OF RECEPTION

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
7:30	7:30—10:30 Laboratory in Bot. C23 Chem. A1 Chem. B5, B6 Chem. C7, C8 Chem. D11, D12 Chem. D13 Engin. C11, C12 Zool. B11, B12 Zool. C31, C32 Zool. D33, C34	Chem. A2, B3 Econ. C25, C26 French I B3, C4 Germ. C9, C10 Hist. B1, B2 Music I A1, A2 Physiol. D5, D6	Botany B21, B22 Chem. D11, D12 Econ. I B1, B2 Eng. I A21, A22 French I A1, A2 Germ. I B3, B4 Hist. A13, A14 Latin C7, C8 Law B1, B2 Zool. D14	Chem. A2, B3 Econ. C25, C26 Eng. II A21, A22 French I B3, C4 Germ. C9, C10 Hist. B1, B2 Music I A1, A2 Zool. C31, C32	Botany B21, B22 Chem. D13 Econ. I B1, B2 Eng. I A21, A22 French I A1, A2 Germ. I B3, B4 Hist. A13, A14 Latin C7, C8 Law B1, B2 Zool. D14	Chem. A2, B3 Econ. C25, C26 Eng. II A21, A22 French I B3, C4 Germ. C9, C10 Hist. B1, B2 Music I A1, A2 Zool. C31, C32
8:30	Eng. A35, A36 Eng. D27, C33 or D12 Germ. III, B3, B4 Latin A1, A2 Law C17, D18 Music B3, B4	Chem. A1, A2 Econ. D27, D30 Eng. I A1, A2 Eng. I B3, B4 Eng. B3a Eng. B31, B32 Eng. D44 German D11, D12 Hist. D11, D12 Italian C33, D34 Philos. B23, C32 Physics B1, B2 Psychol. B3, C4 Span. B21, B22	Bible B21, B22 Chem. D21, D22 Econ. C5, C6 Eng. D5, D6 French II B3, C4 Germ. II B3, B4 Hist. B21, B22 Math. I A5, A6 Math. A9, A10 Math. D27, D28 Philos. B21 Psychol. I B1, C6	Chem. A1, A2 Econ. D27, D30 Eng. I A1, A2 Eng. I B3, B4 Eng. B3a Eng. D44 Eng. B31, B32 Germ. D11, D12 Hist. D11, D12 Italian C33, D34 Philos. B23, C32 Physics B1, B2 Psychol. B3, C4 Span. B21, B22	Bible B21, B22 Econ. C5, C6 Eng. D5, D6 French II B3, C4 Germ. II B3, B4 Hist. B21, B22 Math. I A5, A6 Math. A9, A10 Math. D27, D28 Philos. B21 Psychol. I B1, C6	Chem. A1, A2 Econ. D27, D30 Eng. I A1, A2 Eng. I B3, B4 Eng. B3a Eng. D44 Eng. B31, B32 Germ. D11, D12 Hist. D11, D12 Italian C33, D34 Philos. B23, C32 Physics B1, B2 Psychol. B3, C4 Span. B21, B22
9:30	Chem. B5, B6 Chem. C7, C8 Greek B3, B4 Hist. C15, D16 Italian B31, B32 Latin A3, A4 Music II A1, A2	Econ. B21, B22 Eng. II A1, A2 Eng. C9, C10 Geol. B1, B2 Germ. C19, C20 Hist. I A7, A8 Latin B5, B6 Law C3, C4 Math. B13, B14 Music C7, C8 Psychol. C7, D8 Span. C23, C24	Astron. C3, D6 Bible D25, C28 or Bible C33, D42 Chem. C16 Econ. D7, D10 Eng. B23, C28 French II A1, A2 Germ. A1, A2 Latin D11, D12 Math. A1, A2 Math. A3, A4 Math. II A5, A6 Psychol. II B1, B2 Philos. B24	Econ. B21, B22 Eng. II A1, A2 Eng. C9, C10 Eng. III A21, A22 Eng. D27, C33 or D12 Geol. B1, B2 Germ. C19, C20 Hist. I A7, A8 Latin B5, B6 Law C3, C4 Math. B13, B14 Music C7, C8 Psychol. C7, D8 Span. C23, C24	Astron. C3, D6 Bible D25, C28 or Bible C33, D42 Chem. C16 Econ. D7, D10 Eng. B23, C28 French II A1, A2 Germ. A1, A2 Latin D11, D12 Math. A1, A2 Math. A3, A4 Math. II A5, A6 Psychol. II B1, B2 Philos. B24	Econ. B21, B22 Eng. II A1, A2 Eng. C9, C10 Eng. III A21, A22 Eng. D27, C33 or D12 Geol. B1, B2 Germ. C19, C20 Hist. I A7, A8 Latin B5, B6 Law C3, C4 Math. B13, B14 Music C7, C8 Psychol. C7, D8 Span. C23, C24
10:30	CHAPEL	CHRISTIAN ASSOCIATIONS	CHAPEL	CHAPEL OR LECTURE	CHAPEL	CHAPEL OR ASSEMBLY
11:15	Art B9, B10 Astron. B1, B2 Biol. A1, A2 Chem. C9, C10 Econ. II B1, B2 Eng. IV A21, A22 French B3', C4' Germ. D7, D8 Hist. C3, D4 Math. C17, C18 Math. C19, D20 Music C11, B12 Span. D25, D26 Zool. B18	Botany C24 Econ. B3, C28 Eng. II B3, B4 Eng. V A21, A22 Eng. B24a, B24b French III A1, A2 Germ. B1', B2' Hist. II A7, A8 Math. A2, A1 Math. B7a, B8a Music B5, B6 Philos. C25, C26 Physics C3, D4 Zool. B11, B12	Astron. B1, B2 Biol. A1, A2 Chem. C9, C10 Econ. II B1, B2 Eng. IV A21, A22 Eng. C34a, C34b French B3', C4' Germ. D7, D8 Hist. C3, D4 Latin D5', D6' Math. C17, C18 Math. C19, D20 Music C11, B12 Span. D25, D26 Zool. B18	Botany C23, C30 Econ. B3, C28 Eng. II B3, B4 Eng. V A21, A22 Eng. B24a, B24b French III A1, A2 Germ. B3', B4' Hist. II A7, A8 Math. A2, A1 Math. B7a, B8a Music B5, B6 Philos. C25, C26 Physics C3, D4 Zool. B11, B12	Astron. B1, B2 Econ. II B1, B2 Eng. C34a, C34b Germ. D7, D8 Hist. C3, D4 Math. C17, C18 Math. C19, D20 Music C11, B12 Physiol. A1, A2 Span. D25, D26	Botany C25, D26 Econ. B3, C28 Eng. II B3, B4 French III A1, A2 Hist. II A7, A8 Math. A2, A1 Math. B7a, B8a Music B5, B6 Philos. C25, C26 Physics C3, D4
1:00	Chem. D11, D12 Econ. I B1, B2 French I A1, A2 Germ. I B3, B4 Hist. A13, A14 Latin C7, C8 Law B1, B2 Zool. D14		Bible A1, A2 Eng. VI A21, A22 Physiol. B3, B4		Bible C7, C8 Eng. VI A21, A22 Physiol. B3, B4 Zool. D33, C34	
2:00	Bible B21, B22 Chem. D21, D22 Econ. C5, C6 Eng. D5, D6 French II B3, C4 Germ. II B3, B4 Hist. B21, B22 Math. I A5, A6 Math. A9, A10 Math. D27, D28 Philos. B21 Psychol. I B1, C6		Eng. A35, A36 Eng. D27, C33 or D12 Germ. III B3, B4 Latin A1, A2 Law C17, D18 Music B3, B4		Bible C5, C6 Eng. D27, C33 or D12 Germ. III B3, B4 Latin A1, A2 Law C17, D18 Music B3, B4	
3:00	Astron. C3, D6 Bible D25, C28 or Bible C33, D42 Chem. C16 Econ. D7, D10 Eng. B23, C28 French II, A1, A2 Germ. A1, A2 Latin D11, D12 Math. A1, A2 Math. A3, A4 Math. II A5, A6 Psychol. II B1, B2 Philos. B24 Phys. Ed. I A11, A12		Bible B3, B4 Germ. C9', C10' Greek B3, B4 Hist. C15, D16 Italian B31, B32 Latin A3, A4 Music II A1, A2	Phys. Ed. I A11, A12	Chem. B5, B6 Greek B3, B4 Hist. C15, D16 Italian B31, B32 Latin A3, A4 Music II A1, A2	
4:00	Art B11, B12 Engin. D13, D14 French D7, D8 Philos. D27, D28 Phys. Ed. II A11, A12	Art B11, B12 Engin. D13, D14 French D7, D8 Philos. D27, D28 Phys. Ed. A1, A2		Art B11, B12 Engin. D13, D14 French D7, D8 Philos. D27, D28 Phys. Ed. II A11, A12	Phys. Ed. A1, A2	
5:00	Phys. Ed. B13, B14	Phys. Ed. B3, B4		Phys. Ed. B13, B14	Phys. Ed. B3, B4	
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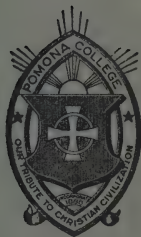
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Pomona College Bulletin

ANNUAL CATALOG

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V. XII

NOVEMBER, 1915

No. 6

CLAREMONT, CALIFORNIA

Published Bi-monthly by Pomona College

Entered at the Postoffice, Claremont, California, as Second-Class Matter

POMONA COLLEGE

LOCATION

Pomona College is located at Claremont, California, on the Santa Fe and the Pacific Electric Railways, 35 miles from Los Angeles. Pomona is about four miles distant from the Southern Pacific and Salt Lake Railways, and is connected with Claremont by an electric line.

CORRESPONDENCE

Claremont, California, is the post-office address for all mail intended for those connected with Pomona College.

General correspondence should be directed to the President or Pomona College.

Special correspondence regarding the admission or standing of students should be directed to the Registrar, save in the case of incoming Freshmen, who should address Professor H. E. Robbins.

CORPORATE NAME

Pomona College is a corporation formed and existing under the laws of the State of California. In making bequests or legacies, the testator should use the corporate name, which is "Pomona College."

Twenty-eighth Year

Pomona College

ANNUAL CATALOG

Register of officers and teachers for the year 1915-1916; requirements for admission, description of courses and general information.

November, 1915

CLAREMONT, CALIFORNIA

Published by the College

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CALENDAR

1915

OCTOBER

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1916

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SEPTEMBER

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COLLEGE CALENDAR

1915

<i>September 20 Monday</i>	} Registration Days. Monday Tuesday, examinations for trance
<i>September 21 Tuesday</i>	
<i>September 22 Wednesday</i>	
<i>September 22 Wednesday</i>	Academic year begins, 10:30 a.
<i>October 14 Thursday</i>	Founders' Day
<i>Date to be chosen</i>	Mountain Day
<i>November 24 Wednesday</i>	Thanksgiving Recess begins, 10 a. m.
<i>November 29 Monday</i>	Thanksgiving Recess ends, 10 a. m.
<i>December 17 Friday</i>	Christmas Recess begins, 10 a. m.

1916

<i>January 4 Tuesday</i>	Christmas Recess ends, 10:30 a
<i>January 13 Thursday</i>	Last day for choice of studies the following semester
<i>January 24 Monday</i>	Kinney Freshman Contest in D lamation, 8 p. m.
<i>January 20 Thursday</i>	Day of Prayer for Colleges
<i>January 24 Monday</i> to	} Mid-year Examinations
<i>February 3 Thursday</i>	
<i>February 4 Friday</i>	} Registration Days for Second mester. Examinations for trance
<i>February 5 Saturday</i>	
<i>February 17 Thursday</i>	Matriculation Day
<i>February 22 Tuesday</i>	Washington's Birthday
<i>Date to be chosen</i>	Senior Mountain Day
<i>March 24 Friday</i>	Spring Recess begins, 10:30 a.
<i>April 4 Tuesday</i>	Spring Recess ends, 10:30 a. m.
<i>Date to be chosen</i>	Mountain Day
<i>May 30 Tuesday</i>	Memorial Day
<i>June 1 Thursday</i>	Last day for choice of studies the following semester
<i>June 7 Wednesday</i> to	} Final examinations
<i>June 17 Saturday</i>	

17 <i>Saturday</i>	Choral Union Concert, 8 p. m.
18 <i>Sunday</i>	Baccalaureate Sermon, 10 a. m. Annual Address before the Christian Associations of the College, 7:30 p. m.
19 <i>Monday</i>	Dole Prize Debate, 3 p. m. Phi Beta Kappa Anniversary, 8 p. m.
20 <i>Tuesday</i>	Class Day Annual Meeting of the Board of Trustees President's Reception, 4 to 6 p. m. Senior Class Play, 8 p. m.
20 <i>Tuesday</i>	} Annual Exhibit of the School of Art and Design
21 <i>Wednesday</i>	
21 <i>Wednesday</i>	Commencement Exercises, 10 a. m. Informal Addresses, 2 p. m. Annual Meeting of Alumni, 4 p. m. Alumni Banquet, 7 p. m.
26 <i>Monday</i>	Summer Session begins
August 4 <i>Friday</i>	Summer Session closes
September 25 <i>Monday</i>	} Registration Days. Monday and Tuesday, examinations for entrance
September 26 <i>Tuesday</i>	
September 27 <i>Wednesday</i>	
September 27 <i>Wednesday</i>	Academic year begins, 10:30 a. m.

Historical Sketch

The history of the development of Southern California from a land sparsely inhabited and thought fit only for cattle range into a genuine American commonwealth, with its multitude of prosperous communities, covers less than forty years, but those are years of intense activity and markable growth.

The completion of a second transcontinental railway in 1887, together with the realization of the great agricultural possibilities of the section through irrigation, induced at the time a rapid immigration and a great inflation of land values. On every hand new towns sprang up almost in a day and the scenes of eager frontier life were being enacted.

While the dominant interests were naturally commercial and speculative, there were many among the new settlers whose chief concern was for the higher values of life and character. Not least among these were those whose former affiliations had been with New England and its institutions. The Southern California District Association of Congregational Churches, meeting at San Bernardino in 1882, stated the question of the founding of a college of the New England type. In 1886 the Association met at Lugo (now Redlands), when the report of the educational committee was an earnest appeal for such a college. At the meeting a larger educational committee than usual was appointed and was instructed to view locations and invite proposals of aid toward establishing a "Christian college of New England type." In accordance with these instructions the committee visited various places from which they received offers of aid.

In May, 1887, the District Association met in Los Angeles and became the General Association of Southern California. This General Association immediately gave full power to a committee of education, not only to select the college site but to appoint trustees for the institution which was to

teen trustees, three of whom are still members of the board, were duly appointed and the college was incorporated October 14, 1887, under the name of The Pomona College. The site selected was about four miles north of the City of Pomona.

For the immediate needs of the College a small private house was rented in Pomona, and in it the work of instruction was begun in September, 1888. In the following January an unfinished hotel in Claremont (now Sumner Hall), together with considerable land adjacent, was given to the college and the work was transferred to that place. The site originally selected was given up and Claremont was made the permanent seat of the college.

The first class was graduated in 1894, at which time the total number of college students was forty-seven. In 1915 the graduating class numbered seventy-two and the present enrollment is five hundred and fifty-one.

The original campus of about twelve acres has been enlarged by purchase and by gifts, until it now comprises over one hundred acres. A plan for the development of the campus and its buildings has been carefully worked out by competent landscape gardeners and architects, and all growth is in accordance with this harmonious plan.

The Board of Trustees is a self-perpetuating body, free from all ecclesiastical control, but pledged by the College Charter to maintain an institution thoroughly Christian and thoroughly unsectarian.

From the first it has been the policy of trustees and faculty to maintain a high standing of college life and work, and to put the emphasis upon quality in the development of strong and serviceable Christian manhood and womanhood. Thus the purpose for which the College was founded is expressed in its motto, Our Tribute to Christian Civilization.

Amended Articles of Incorporation

WHEREAS, at a meeting of "The Pomona College," a corporation, duly called and held on the 21st day of February 1907, a majority of said members being present, it was unanimously voted to amend the Articles of Incorporation of said corporation by changing the name of said corporation from "The Pomona College" to "Pomona College," and by making various amendments, as hereafter set forth, and

WHEREAS, after due and legal notice given, as required by law, the Superior Court of Los Angeles County, did on the 28th day of June, 1909, upon the petition of a majority of the members of said corporation, make an order authorizing the change of the name of said corporation from "The Pomona College" to "Pomona College," and

WHEREAS, there has been filed with the Secretary of said corporation, the written assent of more than a majority of the members of said corporation to making and filing the amended articles of incorporation, as hereinafter set forth; now, therefore,

KNOW ALL MEN BY THESE PRESENTS:

That we, the undersigned, have this day voluntarily associated ourselves together for the purpose of forming a corporation under the laws of the State of California, and we hereby certify:

I.

That the name of said corporation shall be "Pomona College."

II.

That the purposes for which it is formed are:

(a) To establish, maintain and conduct a College and Academy of Learning, with all the powers and privileges conferred by law upon such corporation.

- b) That said College and Academy shall be distinctly Christian, in harmony with Evangelical Churches, but not sectarian, and shall be open to students of both sexes.
- c) To buy and sell, hold, rent, lease and otherwise manage or dispose of, as may be necessary for the conduct of said corporation, all kinds of real and personal property.
- d) To receive, manage and hold gifts and bequests for the use and benefit of said institution, or any work conducted by said institution or for the benefit of any person or persons concerned with said institution.

III.

The location of said College shall be at Claremont, County of Los Angeles, State of California, which shall be the location of the principal office of said corporation. The location of the Academy shall be at such place within the State of California, as may be designated by the Board of Trustees of said corporation.

IV.

That the number of Trustees shall be twenty-five. The names and residences of those chosen to act as Trustees, and who are now acting as Trustees of said corporation, are as follows:

(Here follow the names and residences of the Trustees.)

V.

There has been subscribed the following property to assist in founding the College and Seminary:

(Here follows the description of the property.)

BOARD OF TRUSTEES

GEORGE W. MARSTON, *President*, San Diego

RT. REV. JOSEPH H. JOHNSON, D. D., *Vice-President*, Los Angeles

REV. CHARLES B. SUMNER, LL.D., *Secretary*, Claremont

CHARLES E. WALKER, *Treasurer*, Pomona

Term of Office Expires, June, 1916

REV. FRANK M. DOWLING, Fullerton

RT. REV. JOSEPH H. JOHNSON, D.D., Los Angeles

FREDERICK W. LYMAN, Pasadena

BUTLER A. WOODFORD, Claremont

FRANCIS C. YEOMANS, Long Beach

Term of Office Expires, June, 1917

REV. RAYMOND C. BROOKS, D. D., Berkeley

EDWIN F. HAHN, Pasadena

STEPHEN H. HERRICK, Riverside

SEELEY W. MUDD, Los Angeles

CHARLES E. WALKER, Pomona

Term of Office Expires, June, 1918

LLEWELLYN BIXBY, Long Beach

REV. WILLIAM HORACE DAY, D.D., Los Angeles

ARTHUR M. DOLE, Pomona

REV. HENRY KINGMAN, D.D., Claremont

WILLIAM S. MASON, Evanston, Ill.

Term of Office Expires, June, 1919

JAMES A. BLAISDELL, D.D., Claremont

CHARLES E. HARWOOD, Upland

REV. CHARLES B. SUMNER, LL.D., Claremont

W. H. R. WELDON, South Pasadena

FRED M. WILCOX, Lamanda Park

Term of Office Expires, June, 1920

NATHAN W. BLANCHARD, Santa Paula

ELI P. CLARK, Los Angeles

WINFRED E. GARRISON, PH. D., Claremont

WILLIAM F. HOLT, Redlands

GEORGE W. MARSTON, San Diego

REV. EDWARD F. GOFF, *Business Manager*, Claremont

Committees of the Board

Executive Committee

JAMES A. BLAISDELL, Chairman
CHARLES B. SUMNER, Secretary
ARTHUR M. DOLE
CHARLES E. HARWOOD
CHARLES E. WALKER
FRED M. WILCOX
BUTLER A. WOODFORD

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HENRY KINGMAN
WILLIAM S. MASON
SEELEY W. MUDD

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LLEWELLYN BIXBY
WILLIAM H. DAY
FRANK M. DOWLING
EDWIN F. HAHN

*Committee on Buildings and Grounds**

CHARLES B. SUMNER
GEORGE W. MARSTON

Committee on Nominations

JAMES A. BLAISDELL
LLEWELLYN BIXBY
CHARLES B. SUMNER

*In conjunction with a committee of the Faculty

FACULTY

JAMES ARNOLD BLAISDELL

345 College

President, 1910¹

B.A., Beloit College; M.A., Beloit College; D.D., Beloit College. Graduate, Hartford Theological Seminary.

EDWIN CLARENCE NORTON²

137 W. Seventh

Dean of the College and Professor of the Greek Language and Literature on the Edwin Clarence Norton Foundation, 1888

B.A., Amherst College; M.A., Amherst College and University; Ph. D., Carleton College; D.D., Pacific Theological Seminary. Graduate Student, Johns Hopkins and Oxford Universities.

FRANK PARKHURST BRACKETT

270 E. Third

Professor of Mathematics on the Joseph W. Fiske Foundation and Director of the Observatory, 1888

B.A., Dartmouth College; M.A., Dartmouth College. Observatory Fellow, Clark University.

PHEBE ESTELLE SPALDING

261 W. Fifth

Professor of English Literature on the Phebe Estelle Spalding Foundation, 1889

B.L., Carleton College; M.L., Carleton College; Ph.D., Carleton University.

DANIEL HERBERT COLCORD

157 E. Seventh

Professor of the Latin Language and Literature, 1890

B.A., Amherst College; M.A., Amherst College; B.D., Andover Theological Seminary. Graduate Student, Harvard University.

ARTHUR DART BISSELL

319 Harvard

Professor of German, 1892

B.A., Amherst College; M.A., Amherst College; B.D., University. Graduate Student, Yale University and University of Leipzig.

GEORGE GALE HITCHCOCK

143 E. Tenth

Professor of Physics, 1892

B.A., University of Nebraska. Graduate Student, Johns Hopkins and Cornell Universities.

¹The date in each case denotes the beginning of original term of service.²Absent on leave, 1915—1916.

• Sacramento

B.S., Michigan Agricultural College; M.S., Michigan Agricultural College; D.Sc., Michigan Agricultural College. Graduate Student, Harvard and Cornell Universities.

105 College Ave.

B.A., Pomona College; B.A., Yale University; Ph.D., Yale University.

146 E. Tenth St.

B.A., Yale University; M.A., Yale University; B.D., Union Theological Seminary. Graduate Student, University of Berlin.

Sumner Hall

B.S., Mount Holyoke College; M.A., Mount Holyoke College.

833 Indian Hill Blvd.

B.A., Beloit College; M.A., Beloit College; Ph.D., Johns Hopkins University. Graduate Student, University of Chicago.

507 Yale Ave.

B.A., Knox College; M.A., Knox College; Litt.D., Knox College; B.D., Yale University. Graduate Student, University of Leipzig.

927 Harvard Ave.

B.A., Illinois College; M.A., Illinois College; M.A., Harvard University. Graduate Student, Harvard and Chicago Universities.

232 W. Fifth St.

B.A., Princeton University; M.A., Harvard University;
Ph.D., Harvard University.

1122 College Ave.

B.L., University of Illinois.

¹Absent on leave, second semester, 1915—1916.

WILLIAM ATWOOD HILTON

1264 Dartmouth A

Professor of Zoology on the Willard George Halsted Foundation, 1905

B.S., Cornell University; Ph.D., Cornell University.

FRED ALBERT BACON

736 College A

Professor of Applied Music and Instructor in Singing, 19

Student in Ohio Wesleyan University, Oberlin Conservatory of Music, Chicago Conservatory of Music and Chicago Musical College.

WILLIS ALLEN PARKER

545 Indian Hill Bl

Professor of Philosophy, 1912

B.A., Kansas State Normal School; M.A., Harvard University; Ph.D., Harvard University.

WILLIAM POLK RUSSELL

506 E. Sixth

Associate Professor of Mathematics, 1904

B.A., Cumberland University; M.A., Cumberland University. Graduate Student, Columbia and Yale Universities.

MARO BEATH JONES

306 College A

Associate Professor of Romance Languages, 1911

B.A., Boston University. Graduate Student, University of Geneva and Barcelona. Student, Estudis Universitaris Catalans.

HANNAH TEMPEST JENKINS

Claremont J

Assistant Professor of Art and Design, 1905

Graduate, Teacher's College, Columbia University. Studied Philadelphia Academy of Fine Arts. Pupil of Jean Paul Laurens, Constant and St. Pierre in figure and portrait, of Herbert Thompson in landscape, and of Wm. M. Chase, Robert Vonnoh and Cecelia Beaux in portrait. Paris Salonist, 1889.

ROBERT TRESILIAN BELCHER

169 W. Sixth

Assistant Professor of Mathematics and Engineering, 19

B.A., Queen's University. Graduate Student, Queen's University and University of California.

ARTHUR VOLNEY STOUGHTON

146 W. Seventh

Assistant Professor of Physiology and Hygiene, 1911

B.A., Pomona College; M.D., Ohio Medical University. Graduate Student, Medical Department of Johns Hopkins University and Medical School of Harvard University. Studied Laboratories of Friedrichshain Krankenhaus and private laboratory of Professor Pick, Berlin. Resident physician, Protestant Hospital, Columbus, O.

- WALTER ALFRED ALLEN 131 E. Tenth St.
Assistant Professor of Musical Theory and Appreciation,
and Instructor in Organ, 1912
 B.A., Beloit College. Graduate Student, Yale University.
- WILLIAM LAYTON STANTON Glendora
Assistant Professor of Physical Education for Men, 1908
 B.A., Dickinson College. Graduate Student, Columbia University.
- MURRAY CHARLTON SQUIRE 248 W. Seventh St.
Assistant Professor of Physical Education for Women, 1910
 B.A., Pomona College. Graduate Student, University of California and Wellesley College.
- ROBERT MARTIN STAPLES First St. and Yale Ave.
Assistant Professor of Violin, 1907
 Pupil of Joachim and Dancla.
- HOWARD PAYSON BARTLETT Claremont Inn
Assistant Professor of Chemistry, 1909
 B.A., Dartmouth College; M.A., Harvard University; Ph.D., Harvard University.
- WILLIAM SHEFFIELD AMENT¹
Assistant Professor of English, 1912
 B.A., Oberlin College.
- VICTOR EDWARD MARRIOTT²
Librarian, 1912
 B.A., Beloit College. Graduate Student, Yale University and University of California.
- ERVING OTIS PECKER Claremont Inn
Assistant Professor of Romance Languages, 1912
 B.A., Boston University. Graduate Student, Boston University.
- WILLIAM HOLLAND MATLOCK 246 Dartmouth Ave.
Assistant Professor of German, 1913
 Ph.B., Drake University. Graduate Student, Goettingen, Heidelberg and Munich, the Sorbonne and College of France.
- DAVID LIVINGSTONE CRAWFORD 137 W. Seventh St.
Assistant Professor of Botany on the Henry Kirke White Bent Foundation, 1914
 B.A., Pomona College; M.A., Leland Stanford University. Graduate Student, Cornell University.

¹Absent on leave, 1915—1916.²Absent on leave, first semester, 1915—1916.

ELLA WHITE BROWN

301 Smiley F

Assistant Professor of English, 1915

B.S., Central Normal College; M.A., Campbell College;
LL.B., Kansas University.

HOMER ELMER ROBBINS

Harrison and Berkeley Av

Assistant Professor of Ancient Languages, 1915

B.A., University of Michigan; M.A., University of Michigan;
Ph.D., University of Michigan. Graduate student and holder
of University and Buhl Classical Fellowships, University
Michigan.

WALTER EARLE HARTLEY

920 Harvard A

Assistant Professor of Organ and Piano, 1915

B.A. and B. Mus., Yale University. Associate, American
Guild of Organists. Pupil of Widor in Organ and Composition,
and Stubbs.

WILLIAM HARDIN HUGHES

207 Sixth

*Acting Assistant Professor of Psychology and Education,
1915*

Ph.B., University of Chicago; M.A., University of Chicago;
Graduate Student, University of California.

CARL CLARENCE KIESS

Claremont 1

Acting Assistant Professor of Astronomy, 1915

B.A., Indiana University; Ph.D., University of California

MABLE CLAIR WEST

1016 Columbia A

Instructor in Piano, 1905

B.S., Pomona College. Graduate Student, Peabody Conservatory
of Music, Baltimore.

FRANCES BENTON CLAPP

157 W. Seventh

Instructor in Piano and History of Music, 1912

B.A., Pacific University; Holder of Diploma in Music, Pacific
University. Graduate Student, Pacific University. Student
in Piano of Alberto Jonas, Berlin, 1910-1912. Student in Theory
and Composition, Professor Paul Colberg, Dresden, 1911.

MRS. HARRY DOW KIRK

629 College A

Instructor in Singing, 1912

MARY STODDARD ROOF

407 Harvard A

Instructor in Physical Education for Women, 1914

B.A., Pomona College.

- RY ALONZO BRANDT 122 Smiley Hall
Instructor in Economics, 1914
 B.A., Pomona College.
- RRIET PASMORE¹
Instructor in Piano and Singing, 1914
 B.A., University of California.
- DERICK NEWTON EDWARDS 121 Smiley Hall
Instructor in Forensics and English, 1915
 B.A., Pomona College; M.A., University of California.
- RED OSWALD WOODFORD² 639 Yale Ave.
Instructor in Chemistry, 1915
 B.A., Pomona College. Graduate Student, University of California.

Lecturers 1915-1916

- IV. ALBERT PARKER FITCH, D. D.
President of Andover Theological Seminary
Theme: Religion and the Undergraduate
- IV. WILLIAM ORR WARK, B. A. 821 Dartmouth Ave.
Theme: Biblical Literature
- EV. WILLIAM ZUMBRO, M. A.
President of Pasumalai Institute
Theme: Comparative Religion

¹Absent on leave, 1915—1916

²Absent on leave, first semester, 1915-1916

Administrative Officers of the Faculty

JAMES ARNOLD BLAISDELL, D.D. President's Rooms, Librarian
President

EDWIN CLARENCE NORTON,¹ PH.D.
Dean

FRANK PARKHURST BRACKETT, M.A. Dean's Office, Librarian
Acting Dean

GRACE ELLA BERRY, M.A., Sumner House
Dean of Women

MILTON ERASTUS CHURCHILL, LITT.D. Secretary's Office, Room 52, Librarian
Secretary of the Faculty

FRANK PARKHURST BRACKETT, M. A. The Observatory
Director of the Observatory

MENDAL GARBUTT FRAMPTON, M.A. Registrar's Office, Holmes House
Acting Registrar

VICTOR EDWARD MARRIOTT,² B.A. Librarian
Librarian

HOMER ELMER ROBBINS, PH.D. Librarian
Assistant to the President

MARION JEANETTE EWING, B.A. Librarian
Assistant Librarian

GEORGIA GRACE THOMAS Registrar's Office
Assistant Registrar and Assistant Secretary of the Faculty

Advisers

Graduate Students—PROFESSOR LYMAN

Senior Class—PROFESSOR BRACKETT

Junior Class—ASSISTANT PROFESSOR MATLOCK

Sophomore Class—PROFESSOR SUMNER

Freshman Class—PRESIDENT BLAISDELL, DEAN BERRY, ASSISTANT PROFESSOR ROBBINS

Department of Music—PROFESSOR BACON

Department of Art and Design—ASSISTANT PROFESSOR JENKINS

¹ Absent on leave, 1915-1916.

² Absent on leave, first semester, 1915-1916.

Other Officers

- WARD FADE GOFF 338 Harvard Ave.
Business Manager
- NEST EVERETT JONES, B.S. 136 E. Ninth St.
*Assistant Business Manager and Business Manager of
Student Activities*
- GENE W. BROOKS 346 Yale Ave.
Accountant
- RSIS ETHEL GEIER, B.A. 157 W. Seventh St.
Cashier
- MARY LOUISE BILLINGS 541 Harvard Ave.
General Office Secretary
- RAH LOUISE JEWELL Sumner Hall
Matron of Sumner Hall
- LORENCE MARIE FOX 157 W. Seventh St.
Assistant in the Registrar's Office
- ELEN BROWN DE CAMP Seventh St. and College Ave.
Assistant in the Registrar's Office
- OREST GLENN HUTCHISON Blanchard Park
Superintendent of Grounds
- ARL MAURITZ CARLSON 922 Columbia Ave.
Superintendent of Buildings

Standing Committees for 1915-1916

With Place and Time of Meeting

Athletics—Messrs. Russell, Stoughton, Stanton, Bartlett, Miss Squire. Room 3, 2:00 p. m., Friday.

*Buildings and Grounds*¹—Messrs. Stearns, Hitchcock, Bacher. On call.

Classification—Messrs. Frampton, Brackett, Sumner, Miss Berry, Messrs. Lyman, Matlock, Robbins. Registrar's office. 1:00 p. m. Friday.

College Life—Messrs. Brackett, Hitchcock, Sumner, Miss Berry, Messrs. Churchill, Neely, Allen, Bartlett, Matlock, Robbins. Room 51, 3:00 p. m., Friday.

Courses of Study—Messrs. Sumner, Lyman, Hilton, Peckham, Hughes. Room 14, 11:15 a. m., Friday.

Educational Efficiency—Messrs. Brackett, Frampton, Neely, Jones, Crawford, Hughes. Room 1, 1:30 p. m. Thursday.

Faculty Meetings—Miss Berry, Messrs. Colcord, Parker, Sumner Hall, 7:30 a. m., Wednesday.

Graduate Work—Messrs. Lyman, Bissell, White, Kierulff. Room 5, 4:00 p. m., Wednesday. On Call.

Library—Miss Spalding, Messrs. Marriott, White, Jones, Stoughton. Room 57, 3:00 p. m., the first Monday of each month.

Publications—Messrs. Churchill, Stearns, White, Hilton, Brandt. Room 52. On call.

Public Events and Lectures—Messrs. Churchill, Hartley, Edwards, with Assistant Business Manager Jones. Room 52. On Call.

Religious Interests—Messrs. Parker, Neely, Marriott, Crawford, Mrs. Brown, Mr. Robbins. Room 58. On call.

Rooms—Messrs. Sumner, Churchill, Frampton. Room 14. On call.

Rules—Messrs. Russell, Churchill, Frampton, Miss Berry. Room 3. On call.

Student Aid and Labor—Mr. White, Miss Berry, Messrs. Matlock, Marriott, Mrs. Brown. Room 10. On call.

Summer School—Messrs. Bissell, White, Hilton, Jones. Room 5. On call.

¹ In conjunction with a committee of the Board of Trustees.

GENERAL INFORMATION

Location and Surroundings

aremont is situated on the Santa Fe and Pacific Electric Railways, thirty-five miles from Los Angeles. It is connected by the Pacific Electric Railway with Pomona, which is four miles distant, on the Salt Lake and Southern Pacific roads. On the rim of an orchard-covered valley, which is hemmed in on all sides by lofty mountains, and with Mt. San Antonio in the immediate background, rising to a height of ten thousand feet, its location is one of rare beauty. Its water supply is taken from artesian wells at the base of the foothills. The town, which now numbers about 1800 inhabitants, owes its existence to the College and the attractive features of the typical college town.

Buildings and Equipment

The College grounds consist of about one hundred acres, of which sixty are included in Blanchard Park, about ten in Alumni Field, and the remainder in the campus proper. There are fourteen buildings on the college campus heated by a central heating plant.

The Mary L. Sumner Hall, named in memory of the wife of Professor Charles B. Sumner, is a dormitory affording accommodations for seventy women.

Holmes Hall, a memorial of Cyrus W. Holmes, Jr., of Boston, Massachusetts, is devoted mainly to recitation rooms, and the offices of the registrar.

Pearsons Hall of Science, the gift of Dr. D. K. Pearsons, contains the museum, and the laboratories and lecture rooms of the departments of chemistry, botany, physics and geology. In this building, too, is the Business Office.

The museum is equipped especially for the work in

biology, botany and zoology. It contains an abundance of good synoptical material, including about two hundred and fifty thousand zoological specimens and an herbarium of about two hundred thousand sheets of plants. The Seaver Rivers collection contains fifty thousand specimens of fossils. Mollusca collected in the Pliocene of Santa Monica, California, by Dr. Rivers, formerly Curator of the Museum of the State University.

The chemical laboratories are equipped with hoods, gas generators, steam baths, and the usual appliances demanded for thoroughly good work. The department is equipped throughout with water, gas and electricity and has individual desks, and equipment for one hundred and eight students.

The physical laboratories are well equipped with apparatus selected from standard patterns of the best domestic and foreign instrument makers. Each year valuable additions are made to the equipment.

The biological laboratories contain an extensive series of skeletons and models for use in comparative anatomy. For laboratory work, in general and advanced zoology, there is abundant material, both wet and dry, from all parts of the world. The reference collections for use in general and special entomology are in many respects unexcelled.

The botanical equipment, besides the herbarium, has for use in general mycology a complete bacteriological outfit of sterilizers, incubators, and cultural apparatus.

All of these laboratories possess full batteries of microscopes and microtomes, and are well equipped with all the extensive apparatus and appliances necessary in anatomical, physiological, histological, and embryological work.

The Library, the gift of Andrew Carnegie, in addition to housing the library, contains the offices of the President and the Secretary of the Faculty, the General Office, and seminar rooms. Besides the library, the College possesses three notable collections; the Cook-Baker Biological Library, the Astronomical Collection, and the Mason Collection of Californiana. The total number of volumes is nearly 22,000.

the library also receives two hundred and eighty-eight periodicals, including a majority of the best scholastic journals.

In addition to these, a large number of technical publications are received in exchange for the scientific publications of the College, and are kept on file in the two departmental libraries.

The library is a depository for the publications of the Carnegie Institution at Washington, and also for the United States Government documents.

In addition to its own resources, the library has arrangements with the State Library, the State University Library and the Los Angeles City Library, whereby it can draw upon these great depositories for valuable works not found in the largest libraries.

The Frank P. Brackett Observatory, the gift of Mr. Mellynn Bixby, '01, is designed throughout to be of service to the student in the direct study of the stars. It stands in an attractive spot upon an elevation in Blanchard Park. Its equipment includes an equatorial telescope, with a Clark objective of six inches clear aperture, and a mounting, which includes driving clock and other modern conveniences, made by Wm. Gaertner of Chicago, a three-inch astronomical transit and chronograph, both made by the Gaertner Company, a standard Riefler clock for mean solar time, and a less expensive clock for sidereal time; also a horizontal telescope with a six-inch objective, having a focal length of twenty feet and a coelostat. In connection with this is employed a thirteen-foot spectrograph with a two-inch grating, loaned by Mt. Wilson Solar Observatory.

The Albert K. Smiley Hall, of reinforced concrete with a Spanish tile roof, is the dormitory for men. It has both single rooms and suites of three rooms, affording accommodations for eighty students.

Rembrandt Hall, the first section of the Art Building, is devoted chiefly to the work of the Department of Art. The upper floor contains studio and work rooms; the lower floor

a convenient auditorium of moderate size for exhibits assemblies.

The Mabel S. Bridges Hall of Music, the gift of Mr. Mrs. Appleton S. Bridges, of San Diego, just completed offers opportunities for the study of music unexcelled in Southern California. Besides numerous studio and practice rooms it contains a large auditorium and a four man pipe organ. It is here that the daily chapel service is held as well as the concerts of the Choral Union and the recitals of faculty and students. The building is of reinforced concrete with Spanish tile roof.

The Renwick Gymnasium contains ample equipment for physical training, together with shower bath and locker facilities to make of the highest usefulness the swimming pool which adjoins it.

The Claremont Inn has, besides a large student dining room and club room for the College Commons, accommodations for eighty guests.

The Greek Theater, built to take advantage of the natural setting of Blanchard Park, though uncompleted, has at present a seating capacity of over 4000. Here the great Historical Pageant was given in 1913; here are given the senior plays, various concerts and entertainments; and here are held student rallies about bonfires built in the center space.

The Harwood Hall of Botany, the gift of Mr. A. P. Harwood, of Upland, erected in the summer of 1915, is a commodious building, containing lecture rooms and laboratories for the use of the Department of Botany. Adjoining it is the Agricultural and Botanical Laboratory, consisting of a greenhouse, a lath house and a central classroom.

The Marine Laboratory, located at Laguna Beach, has nine private rooms for special workers and two general laboratories, as well as storerooms, work room and aquarium room.

Various other smaller buildings add to the completeness of the College plant.

Honors and Prizes

General Scholarship Honors and Special Departmental Honors are announced at the close of each semester.

General Scholarship Honors are awarded to those who have attained a grade of at least A in all courses pursued and are open only to matriculated students who are also candidates for a degree.

Special Departmental Honors are awarded to those who have attained AA grade in at least one course and have not been below B in any other.

The Dole Prizes. A prize debate, open to the Sophomores, upon some subject selected by the faculty, is arranged at the close of the second semester. First and second prizes of ten and five dollars respectively, established by the late J. H. Dole, in memory of his brother, Mr. W. B. Dole, are endowed by Mr. J. Albert Dole and Mr. A. M. Dole.

The Mudge Latin Prizes. Prizes for excellence in Latin are awarded to Sophomores completing Latin B3 and B4. First and second prizes of ten and five dollars respectively are endowed by friends of the College.

The Llewellyn Bixby Mathematics Prize. A prize for excellence in Analytic Geometry and Calculus; open to all students completing Mathematics C17 and C18. A prize of ten dollars is given by Mr. Llewellyn Bixby.

The Kinney Prizes. A prize declamation contest, open to the members of the Freshman class, occurs toward the end of the first semester. First and second prizes of ten and five dollars, respectively, are given by Mrs. H. N. Kinney.

The Vaile Prizes. Prizes for the best essay or oration on the general subject of Agriculture in Southern California; open to the Junior and Senior classes. First and second prizes of ten and five dollars respectively are endowed by Mr. Charles S. Vaile.

The Lorbeer Prizes. Prizes for the best essay on the subject, "How to Keep Well"; open to all who take the course in Anatomy and Physiology. First and second prizes of five

teen and ten dollars respectively are given by Dr. Th. L. Lorbeer, '03.

The Moncrieff Astronomy Prize. A prize given to student in a first year course in Astronomy, taken regularly in class, whose interest in the study and proficiency in observatory work are indicated by the best notebook kept in accordance with the teacher's suggestion. A prize of ten dollars is given by Miss Flossie C. Moncrieff, '11.

The George A. Gates Prize. A prize given for the best paper upon one of five subjects, dealing with social betterment, selected by the teachers of History and the sciences. A prize of twenty-five dollars is endowed by Pomona Alumni and other friends of Dr. Gates.

The Hager Prizes. Prizes for the best three essays on a foreign missionary subject, open to all students. Prizes of five dollars each are endowed by Mr. and Mrs. C. R. Hager.

Phi Beta Kappa

A chapter of the national scholarship honor society, Phi Beta Kappa, was established at Pomona College, March 1914. Upper classmen "who are of good moral character, who are candidates for the degree of Bachelor of Arts and who are distinguished for breadth of culture and excellence of scholarship," are eligible to membership.

The Association of Collegiate Alumnae

The Association of Collegiate Alumnae organized in 1862 by prominent college women for the "maintenance of high standards of education," and including at the present time forty-five leading universities and colleges received Pomona College to membership in July 1915. By this action women graduates of Pomona College are eligible for membership in any of the local branches of the Association, and for those who are not within reach of such branches there is a provision

for a general membership. The general membership of one dollar may be sent to Miss Katharine E. Pun-
n, 5103 Pulaski Ave., Germantown, Pa. and entitles one
all membership privileges including the Quarterly Jour-

Oratorical and Debating Contests

any opportunities are offered students for obtaining ex-
perience in public address. The Associated Students main-
tains three oratorical contests, the winners of which represent
the College in intercollegiate competition and there are each
year college and freshman intercollegiate debates. A Wom-
en's Oratorical Contest for upperclass women is conducted
at the College. The aim of these contests is to stimulate
students to excellence in public address, and to quickness
of thought in extemporaneous speaking.

Student Activities

THE ASSOCIATED STUDENTS. This association harmonizes
student activities. Its officers are chosen by the student
body from their own number. All important questions are
considered by its executive committee, which is composed of
those prominent in such varied lines as athletics, oratory,
and the editorship of the Student Life. This body has charge
of intercollegiate as well as inter-class relations.

MEN'S ORGANIZATION. The men of the student body
form a voluntary organization electing their own officers and
committees and holding regular meetings. This organization
controls largely the class and social relations of the men.

WOMEN'S ORGANIZATION. The women of the student body
form a similar organization, for considering and regulating
the social relations of the women.

CHRISTIAN ASSOCIATIONS. Branches of the Young Men's
Christian Association and the Young Women's Christian
Association are well organized and doing effective work.

Representation in the inter-collegiate and state convention and the visits of active workers from outside serve to maintain interest in the work both at home and abroad. Through the co-operation of the associations and the College there have been established, as a part of the curriculum, courses in Bible study adapted to all classes of students and conducted by members of the Faculty.

THE POMONA COLLEGE LITERARY SOCIETY, composed of both men and women, meets every two weeks. The work varied in character, covering all literary lines.

THE POMONA COLLEGE DEBATING CLUB is composed of men. It meets every two weeks for prepared and impromptu debates on the live issues of the day.

THE ALPHA KAPPA is a society for women, giving drills, debates and familiarity with important current topics.

THE POMONA COLLEGE LYCEUM, composed of men, is a debating club, and meets bi-weekly.

THE AREOPAGUS is composed of men. The object of the society is to promote efficiency in public speaking, debating and parliamentary drill. Meetings are held every two weeks.

THE DELTA LAMBDA is a debating society for women, meeting bi-weekly.

THE MASQUERS is an organization of students, whose purpose is the study and presentation of plays and the general promotion of the dramatic enterprises of the undergraduate body.

PUBLICATIONS. The *Student Life* is published semi-weekly by the student body. One issue of each month consists of a magazine number, *The Scribbler*; the other issues are devoted to current affairs.

The *Metate* is published each year by the Junior class, and contains material appropriate to a college annual.

The *Association Hand Book*, which contains material of great value, especially to new students, is issued at the beginning of the year by the Christian Associations.

ATHLETICS. The immediate management of all contests and games rests with the Associated Students, though all arrangements are under the supervision of a committee of faculty and a student manager.

Alumni Field, consisting of about ten acres, has been developed by the alumni into athletic grounds unsurpassed in the Southwest in equipment and beauty of setting. First-class tennis courts, an excellent track, baseball and football fields, also hockey and basket ball courts are within the limits of the campus, and athletic exercises and field sports are encouraged by the officers of the institution.

A swimming pool, of the standard size for water polo, and well equipped with modern appliances, is open to all students. An invariable condition to the use of the pool is a pre-annual medical examination.

Students are required to maintain a certain standard of excellence in all their studies in order to represent the College on any of its athletic teams or other organizations competing before the public.

Departmental Activities

THE CHORAL UNION is an organization of students and members of the community for drill in choral work. It meets each Thursday evening for practice under the direction of the Department of Music, and twice each year gives a public concert.

THE POMONA COLLEGE Glee Club, the Pomona College Women's Glee Club, the Pomona College Orchestra, and the Pomona College Band are flourishing organizations under the general direction of the Department of Music.

THE REMBRANDT CLUB is an organization of students and members of the community which meets once a month for study, programs on art subjects, and social intercourse.

THE ASTRONOMICAL SOCIETY aims to help the observatory in its work, in building up its library and in the issuing of

its publications. The associate membership is drawn from the alumni and friends of the College, while the active membership includes the students of astronomy together with members of the faculty and resident graduates.

THE BIOLOGICAL SEMINAR. The aim of the Biological Seminar is chiefly the review and discussion of recent important researches as published in the biological journals. Membership is limited to students of the Junior and Senior classes chosen for excellent scholarship and marked interest in the work of the department, who meet every two weeks with the faculty of the Biological Department.

THE MATHEMATICAL SOCIETY. The Society of Mathematical and Physical Science meets every month for presentation and discussion of results of study and investigation in the physical sciences and mathematics. It is open to advanced students who are interested in these subjects and who desire to take an active part in its work.

THE SCIENCE CLUB. The Biological Seminar, the Mathematical Society and the active membership of the Astronomical Society constitute three sections of the Science Club which holds open meetings bi-monthly. Its programs are of general scientific interest and its meetings are open to students and public.

THE LITERATURE SEMINAR. The purpose of the Literature Seminar is the presentation from a graduate or professional point of view of those masterpieces of literature which have dominated the content and form of other literature. The meetings are monthly and are open to students and community.

DER DEUTSCHE VEREIN is composed of those who have had at least three years of work in German. It meets every two weeks for the reading and discussing of papers in German and for other exercises which tend to cultivate fluency and accuracy in the use of the language.

LE CERCLE FRANCAIS, composed of students making a specialty of the French language, meets fortnightly for presentation

French conversation, presentation of papers and discussion of topics relating to the various aspects of French and literature.

CIRCULO ESPANOL, composed of students making a study of Spanish, meets fortnightly for practice in Spanish conversation and the presentation of appropriate papers in the language, bearing upon the literature and life of the Spanish world.

College Publications

Most of the publications of the College appear in The Pomona College Bulletin, which is issued bi-monthly.

Alumni and departmental publications include:

The *Pomona College Quarterly Magazine*, devoted to the interests of the College and Alumni.

The *Journal of Entomology and Zoology*, published under the auspices of the Department of Zoology.

The *Publication of the Astronomical Society of Pomona College*, published under the auspices of the Department of Astronomy.

Bureau of Appointments

Bureau of Appointments is conducted in connection with the office of the Secretary of the Faculty for the benefit of members of the College who desire to teach after graduation. The purpose of the Bureau is to maintain a list of available positions and to recommend from the applicants registered those who are qualified for specific positions.

An opportunity is also offered graduates of the College who are already engaged in teaching, to register their present positions and to indicate whether they desire a change, if so, under what conditions. An effort is made to ascertain the desires of graduates so far as made known. The services of the Bureau are entirely gratuitous. Communications should be addressed to Professor M. E. Churchill, Secretary of the Faculty.

Registration

INFORMAL REGISTRATION—*Prospective Students.* All who desire to enter Pomona College should file their applications with the Registrar as early as possible. These applications should specify the class which the applicant desires to enter, the time when he wishes to enter, and the work he wishes to do for entrance as well as for advanced credit if any. A statement of work done must be certified to by the proper officer. Specially prepared blanks for these applications may be obtained from the Registrar. In 1916 the freshman class will be limited to two hundred students, one hundred men and one hundred women.

Resident Students. On or before the first Thursday in January and the first Thursday in June all resident students must fill out, in consultation with their class advisers, a preliminary registration schedule designating their choice of subjects for the following semester. A fee of one dollar must be paid for any subsequent change.

FORMAL REGISTRATION. 1. All students are required to register formally on one of the regularly announced registration days preceding the opening of the class work of each semester. A payment of two dollars is required for formal registration, and a payment of one dollar for every change in formal registration. This latter payment is remitted in the case of new students registering for the first time, provided the changes are made within a week of the opening day of the registration period.

2. Students are admitted only to those courses for which they are formally registered.

Reports

A record of the scholarship and deportment of each student is kept, and deficient students are reported to the Registrar. Special reports are made at or near the Thanksgiving and Spring recesses and notification is sent to

ts of any students reported as conditioned or failing at time.
e grade of scholarship is determined by the daily work e class-room supplemented by frequent test reviews and al examinations.
e aim is to encourage faithfulness and regularity in work rather than spasmodic effort to meet some single

Public Assemblies

otional exercises conducted by the President, the mem- of the faculty in turn, or by some invited guest, are in the chapel every week-day morning, except Tuesday, all students are expected to be present.
1 Thursday morning of each week and in exceptional s on Monday or Wednesday the time of the usual Chapel : is devoted to addresses by guests of the College or mem- of the faculty. On Thursday morning also the regular called meetings of the Associated Students are held n time to time. On Saturday morning, as occasion es, the chapel service gives way to general gatherings faculty and students for the presentation and discussion matters of general interest and to class assemblies.
attendance upon the Sunday morning service in the Clare- nt Church is expected except in cases where permission given to attend services elsewhere. Such permission will granted on request.

General Requirements

Students are expected to be loyal to the spirit and purpose the institution and to maintain regular attendance on all lege appointments. Any who fall below grade in scholar- ip, or who for any reason do not prove desirable members the student body, may be dismissed without specific arges.

It is urgently pointed out to both students and parents that the value of a college education consists in no small degree in the fullest participation in the college atmosphere and life. It is important, therefore, that all absence through the college year should be avoided. Some of the most important of the college values are lost by absences on Saturday and Sunday, on which days are centered particularly vital phases of the common life, and it is therefore urged that over-Sunday visits at home or elsewhere be avoided.

The use of tobacco is disapproved and discouraged at all times.

A copy of the Manual of Procedure may be obtained on application to the Registrar. It should be in the hands of all students.

Student Aid

SCHOLARSHIP FUNDS. The income of certain funds is used toward paying the tuition fees of students who are in pecuniary need, and, by authorization of the trustees, is distributed annually through a committee of the faculty. Scholarship aid is given only to students who are or intend to become candidates for a degree from Pomona College who maintain a high standard of honor, who are economical in their habits, who do not use tobacco, who are regular in their attendance upon college exercises, and whose scholarship meets the following conditions: They must earn each semester of the Freshman year at least twelve credits in each subsequent semester at least fifteen credits.

Applicants for aid who have not yet entered college should forward to Professor Wm. H. Matlock, Chairman of the Committee on Scholarships, a formal application accompanied by two letters, one from parent or guardian and the other from principal or teacher, giving information concerning need, character and attainments. They should also send a certified statement of their scholastic record. All applications for aid must be renewed annually on or before May first.

may be withdrawn at any time from students who not to have conformed to the conditions, and is permanently withdrawn after the second forfeiture due to low standing or unsatisfactory deportment.

Recipients of scholarship aid may be called upon to assist college in ways that do not interfere with their studies.

1,000. The Lydia Phelps Memorial Fund, given by Mrs. E. Phelps of Ontario, California, in memory of his

1,000. The Agnes K. Crawford Memorial Fund, given by David R. Crawford and William Crawford of Pomona, California, in memory of their mother.

1,000. The John D. Potter Memorial Fund, given by S. T. Potter of Westboro, Mass., in memory of her husband.

1,000. Given by Mrs. Loraine H. Page of Pomona, California. (\$3,000 of this may at some time be used for other purposes.)

1,500. The Francis Bancroft Memorial Fund, given by James T. Ford of Los Angeles, California, in memory of her father.

1,500. Given by Rev. James T. Ford of Los Angeles, California.

1,500. Given by Mrs. Maria T. Wardwell of Plymouth, Connecticut.

1,000. The Henry Herbert Brown Scholarship Fund, given by Mrs. Fannie E. Brown of Los Angeles, California, in memory of her son.

2,600. Given by Mary E. Elwood of Redlands, California.

3,500. The Mabel S. Bridges Memorial Scholarship, given by Mr. and Mrs. A. S. Bridges of San Diego, California, in memory of their daughter. Available for women.

1,000. The H. G. Billings Memorial Scholarship, given by Mrs. E. A. Billings of Los Angeles, California, in memory of her husband.

2,000. The Thomas F. Howard Memorial Scholarship,

given by Dr. and Mrs. H. G. Brainerd of Los Angeles, California, in memory of Mrs. Brainerd's father.

\$1,200. Given by Miss Jean Loomis, '97, of Pasadena, California.

\$1,800. Given by Dr. Anna H. Searing of Escondido, California.

\$400. The Bristol Memorial Fund. A fund raised in memory of the Reverend Sherlock Bristol.

\$2,000. The Arthur Warren Phelps Memorial Scholarship given by Mrs. C. S. and Mr. C. A. Phelps of Claremont in memory of their son and brother.

SELF-SUPPORT. A committee of the faculty endeavors to find employment for students needing to earn a part of their expenses. Many are thus helping themselves by various forms of labor such as janitor work, waiting on tables at the Commons, general house work, gardening and the like. The most desirable positions are in general secured by upper classmen who have proven themselves good workers and good students, and those coming to the College for the first time should be content if any work which they can successfully do is secured for them. Students in any case should come prepared to pay all bills for at least one semester. Their record during this semester will be a large factor in deciding what opportunities for self-help will be open to them. Applications for aid in securing employment should be addressed to Professor F. H. White, the chairman of the Committee on Student Aid and Labor.

Physical Attention

The physical care of students is a matter of special concern to the College and the advantages of unusual attention and opportunity are offered. The climate of Southern California offers an out-of-door life the year around. Over six months is given to open-air athletics in all seasons. A regular physician is on the faculty of the College. Every student on entering has a physical examination. Regular work

Physical Culture is prescribed throughout the course. A large swimming pool is provided, access to which is free to all students, subject only to a semi-annual physical examination. The College physician gives courses in Physiology and Hygiene and his medical advice is ordinarily available free of charge to all students subject to certain conditions of hours and location of residence, the College meeting these bills; providing that all nursing, surgical dressing, and medicines are at the expense of the ill or injured. *The College, however, reserves the right to discontinue this individual medical service at any time without previous notice.* As a natural result of all this attention the health of the College is such as to give special assurance to all considering attendance at Pomona.

Expenses

ROOMS. Lists and descriptions of rooms available for men and women students are kept at the Business office, for women students at Sumner Hall. Furnished rooms outside the College buildings are rented at prices ranging from twenty to forty-five dollars for the semester. Students are permitted to room only at places approved by the faculty.

To avoid misunderstanding between students and householders, it is advised that agreements regarding rooms be put in written form. Unless written agreement to the contrary is made, it will be assumed that rooms are rented for one semester.

Change of rooms is made only by permission of the faculty.

DORMITORIES—*Sumner Hall.* Women not living in their own homes, unless excused by the faculty, are expected to room in Sumner Hall, which accommodates seventy. This is a commodious and pleasant hall, where the young women come under the direct care of the Dean of Women. In addition to the parlors, which are open to the students for the reception of their friends, there is also on the first floor a large and attractive recreation hall.

Sumner Hall is well equipped with all modern conveniences, including electric lights, steam heat, baths, and laundry furnished with stationary tubs and electric irons for the use of roomers.

There are both single and double rooms, which are well lighted and ventilated. Each room is provided with necessary furnishings, including rug for the floor. The only articles to be supplied by the students are towels and linen and covers for a single bed.

Careful attention is given to the health of the young women residing in the Hall. Illness is rare, yet for such cases as occur, there is provided, opening directly from the matron's room, a pleasant, sunny rest-room, where patients are given the best of care.

Rooms in Sumner Hall are rented for the year at prices ranging from forty to seventy dollars, according to the location and desirability of the room and the number of occupants. The Hall is closed during the Christmas and Spring vacations. A deposit of five dollars is necessary to secure a room in the Hall, and should accompany the application. Rooms are assigned in order of application. The deposit fee is credited on the rent of the room.

Information concerning the dimensions of rooms, number of windows, and similar matters, may be obtained at the business office. The Hall is opened on the Saturday before the beginning of the college year and closed the Saturday after Commencement.

Smiley Hall. A dormitory for men, has both single rooms and suites of three rooms accommodating two students. The dormitory has all modern conveniences and is completely furnished. The only articles to be provided by the students are towels, and linen and covers for the bed. All rooms are equally desirable, the basis of choice in most cases being one's preference for the eastern or western style.

Rooms in Smiley Hall are rented for the year at a price of sixty dollars per occupant paying sixty dollars

use of sickness an equitable adjustment of rent will be made.

These terms do not include the use of the dormitory during the Christmas and Spring vacations, when the Hall will be closed, unless a number desire to remain, in which case the cost of keeping the building open will be an additional charge. Damage to rooms will be charged to the occupants. A deposit of five dollars is necessary to secure a room, and should accompany the application. The amount is credited on the year's rent. The dormitory is opened on the Saturday before the beginning of the college year and closed the Saturday after Commencement.

The College reserves the right to dismiss from the dormitory without rebate any student who has shown himself a disturbing or undesirable occupant.

BOARD. In the College Commons, an unusually attractive and well equipped dining-room in the Claremont Inn, provision is made for the boarding of students under the direct management of the College. A representative committee of students and faculty cooperate in maintaining satisfactory conditions. The rates are the lowest consistent with good quality of food and service, being eighty-six dollars for a semester's meals, payable in four instalments.

The Pomona College spirit is due in no small measure to its common dining hall. There the students meet in pleasant surroundings, are waited upon by companions in study, discuss together college topics, join in enthusiastic backing of college teams and glee clubs and have favorable opportunities for forming close and lasting friendships. For these reasons and for its uniform influence on college life, the faculty regard it as exceedingly desirable that students should board at the Commons.

Those wishing to be in other approved places may do so by permission, but such permission will be given only on condition that the student will pay for the reception of their friends, their necessary expense for the large and attractive recreation.

college year, exclusive of fees for special courses and expenses which are purely personal, varies from \$275 to \$400. Bills are due each semester in advance and must be paid upon registration. If parents desire bills to be sent home, a written request should be made before the beginning of each semester.

No student will be retained in the institution or given an honorable dismissal whose bills are not paid or arranged for.

Tuition

All tuition bills must be paid at the beginning of each semester. Until this has been done cards entitling the student to admission to classes will not be issued.

The regular charge for tuition is composed of two items: a General Charge, uniform in amount, which is required of all students, and an Instruction Charge, varying with the amount of work taken.

GENERAL CHARGE

Required of all students, per semester (18 weeks)\$15.00

INSTRUCTION CHARGE

In all branches there is a further Instruction Charge varying according to the number of Credit Hours assigned to each course. The normal amount of work varies from 16 to 18 hours.

For each hour taken, per semester (18 weeks)\$2.00

ADDITIONAL CHARGE FOR APPLIED MUSIC AND ART

In addition to the General Charge and the Instruction Charge, students taking Applied Music or Art will pay an Additional Charge as follows:

For half-hour private lessons in piano, voice, organ or violin, per semester:

Two lessons a week, according to instructor, \$50.00 or \$36.00
One lesson a week, according to instructor, \$25.00 or \$18.00

For two-hour class lessons in Art, per semester:

Two lessons each week	20.00
One lesson each week	10.00
Pen and Ink, one lesson each week for 9 weeks....	5.00
Sketch Class	1.00

Students may register for applied music and art at any time. Such students, if they enter during a semester, should consult the Registrar as to charges.

Fees

Diploma fee, \$5.00.

Physics and Chemistry, deposit for breakage, \$5.00.

Laboratory fees range from \$4.00 to \$15.00. The exact fee for a given course is stated in connection with the description of that course under Departments of Instruction; in advanced courses only does it exceed \$10.00.

The fees for the use of college pianos for practice are as follows:

One hour a day for a semester.....	\$ 4.50
Two hours a day for a semester.....	8.25
Three hours a day for a semester.....	11.25

RETURN OF TUITION

The General Charge of \$15.00 is retained from the tuition of students withdrawing within two weeks subsequent to the first day of registration of any semester. After that time there is no refunding of any part of the tuition either for courses dropped or for failure to complete a semester's residence, except that one half of the Instruction Charge and of the Additional Charge, if any, is refunded to any leaving college before the middle of any semester on account of illness.

Requirements for Admission

General Requirements and Methods of Admission

It is the purpose of Pomona College to do a distinct and notably high grade of work, thus preparing its graduates for special distinction in such later callings as they may choose. To this end the College wishes to receive only such students as are thoroughly prepared to enter upon college work. Students planning to enter Pomona College should indicate their purpose to the Registrar of the College as early as possible. The College is prepared to give advice and cooperation to prospective students several years in advance of their actual entrance upon college work in order that they may have the most thorough and complete preparation. Students should not leave the matter of their formal application for admission until the entrance day of the year, as the College authorities will carefully scrutinize all applications for admission, and delay in filing applications will inevitably involve delay in acceptance. Additional reason for early application is the limitation in numbers of the Freshman class.

Candidates for admission to any class in Pomona College must present satisfactory evidence of their fitness for college both in character and in scholarship. Testimonials of good moral character and a certificate of honorable dismissal from the last institution attended are required. A medical examination conducted by an authorized physician, under the direction of the Department of Physical Education, is required of all students. Evidence of satisfactory scholarship and of the completion of the required amount of study as indicated in the following pages may be given in one of three ways:

First: Examination by the College.

Students wishing to remove deficiencies by examination

must do so before entering upon college work. Such examinations must be taken during the first three days of registration week of either semester or (by special arrangement) the week preceding the college commencement. They must be arranged for in advance through the Registrar.

Second: Certificate of the College Entrance Examination Board.

Examinations are given by the College Entrance Examination Board at certain times and places which may be learned from the Registrar or from principals of secondary schools.

Third: Certificate from approved schools or colleges. Students from approved schools or colleges are admitted without examination on presentation of a certificate signed by the principal or proper official and showing in detail the requisite completed courses. Certificate blanks obtained from the Registrar should be filled out and returned as early as possible after the completion of the high school year.

Requirements for Matriculation

The standing of all students is provisional until after they have been in residence for one semester. At that time those are matriculated who have shown themselves in accord with the spirit of the College, who have done a satisfactory quality of work during their semester of residence and whose entrance units have been accepted.

Admission to Freshman Standing

The number of students admitted to the freshman class is limited to two hundred—one hundred men and one hundred women; early application is therefore advised. Special blanks for this purpose may be had by addressing the Registrar. Applications are listed in the order of their receipt, are considered individually, and in every case must

be accompanied by a certification both as to scholarship and character. No application is considered which does not show fifteen units in accepted subjects, at least ten of which are recommended. Special endorsement by the Principal must accompany all papers showing non-commended units. Such endorsement to include the specific recommendation of the candidate, both as to character and ability, for the undertaking of college work. Not later than the first of July a notification is sent to those whose credentials are satisfactory and from time to time other applicants are so notified. No applicant, however, is finally enrolled among those definitely accepted, until the sum of \$15 has been deposited with the Registrar as a first payment on tuition. This sum is returned upon request received before the first of September, but not thereafter.

Those are matriculated to full standing who at the end of a semester's residence meet the requirements stated just above; those who do not meet those requirements are not allowed to matriculate and are enrolled as in partial standing. No student in partial standing is recommended to college standing in another institution. The final acceptance of entrance units is based upon the character of the work done in class at Pomona College as well as upon the grades of the units presented.

Admission to Advanced Standing

Students who have sufficient credit from other institutions are admitted to advanced standing on credentials signed by the proper officials and giving full specifications concerning the nature of the courses taken, the time spent in each together with their rank in each subject. They are assigned hours and credits* on the basis of their credentials, but such assignment is provisional until ratified by the Classification Committee. This ratification is not given until after the

*Credits are based upon the grades attained in the work offered. See page 56.

quired semester's residence, at which time the Committee power to act in adjusting hours or credits, or both, to qualifications shown.

Admission as Special Students

ature students, ordinarily only such as are at least twenty-one years of age, may be admitted as special students courses for which by ability and preparation they may be ed. Special students are not candidates for a degree.

Credits for Non-Commended Work

Students who enter with some of their work non-commended may remove their deficiency in one of three ways— examination, by continuing the same line of study in college with high grade or by extra work in college not counted towards a degree. These three methods are more fully described as follows:

First: Students may be examined upon any of the accepted subjects presented for entrance, and upon passing with B grade receive credit toward entrance for that subject. Such examinations must be taken as specified on page 44.

Second: Entrance credit will be given for non-commended work after a student has completed with A grade two or more college courses in the same or a closely allied subject, or upon conditions laid down in individual cases by the Classification Committee.

Third: Entrance credit may be gained by work in certain college courses, but such courses cannot count toward the number of hours or credits required for graduation, nor for honors. Moreover, students may not substitute for subjects specifically required for entrance other subjects taken in this way.

Students are not candidates for a degree nor are they eligible for recommendation to college standing in another institution until they have matriculated. Students are

matriculated only after they have come into full standing. All students must be matriculated before attaining to Junior standing.

Courses Required for Admission to Freshman Standing

In the following outline of courses a "unit" represents a course of study in one subject of high school grade involving five forty-five minute recitations per week or an equivalent for a school year. Laboratory periods should be at least twice the length of recitation periods.

Not less than one unit in any subject is normally accepted though a half unit may be accepted when accompanied by two units for courses in allied subjects.

I. *Specific Requirements—8 units*

English, 2 units	Algebra, 1 unit
History, 1 unit	Geometry, 1 unit
One foreign language, 2 units	*One third or fourth year laboratory science, 1 unit

II. *Additional Requirements—4 units*

Selected from the following:

English	Mathematics
History	*Laboratory Science
Foreign Language	

III. *Elective—3 units*

It is recommended that these electives be chosen from subjects of Group II above, but in view of the importance of other lines of high school work credit is allowed for four units in other courses counted for high school graduation acceptance of which is specifically recommended by the principal of the school.

* Heads of Departments in which students wish to continue laboratory subjects begun in high school may, at their option, require the high school note books to be submitted as evidence of ability to continue with more advanced work in the department.

Description of Subjects

The College recommends that the work offered to meet requirements of Groups I and II above shall cover the amount indicated in the following description of courses. Each of them constitutes one unit unless otherwise designated.

Elementary English.

Rhetoric, composition and literature. (2 units.)

Intermediate English.

Advanced English.

The following list is made the basis of examination. A indicates books selected for careful reading; B those requiring close study.

A. From each of the following groups at least two selections are to be made, except as otherwise provided under Group I.

Group I—Classics in Translation

The Old Testament, comprising at least the chief narrative episodes in Genesis, Exodus, Joshua, Judges, Samuel, Kings, and Daniel, together with the books of Ruth and Esther; the Odyssey, with the omission, if desired, of Books ii and xv-xvii; the Iliad, with the omission, if desired, of Books xi, xiii-xv, xvii, and xxi; the Aeneid. The Odyssey, Iliad, and Aeneid should be read in English translations of recognized literary excellence.

For any selection from this group a selection from any other group may be substituted.

Group II—Shakespeare

Midsummer Night's Dream; Merchant of Venice; As You Like It; Twelfth Night; The Tempest; Romeo and Juliet; King John; Richard II; Richard III; Henry V; Coriolanus; and the following, if not chosen for study under B, Julius Caesar; Macbeth; Hamlet.

Group III—Prose Fiction

Malory's Morte d'Arthur (about 100 pages); Bunyan's Pilgrim's Progress, Part I; Swift's Gulliver's Travels (voyages to Lilliput and to Brobdingnag); Defoe's Robinson Crusoe, Part I; Goldsmith's Vicar of Wakefield; Frances Burney's Evelina; Scott's Novels, any one; Jane Austen's Novels, any one; Maria Edgeworth's Castle Rackrent, or

The Absentee; Dickens's Novels, any one; Thackeray's Novels, any one; George Eliot's Novels, any one; Mrs. Gaskell's Cranford; Kingsley's Westward Ho! or Hereward, Wake; Reade's The Cloister and the Hearth; Blackmore's Lorna Doone; Hughes's Tom Brown's Schooldays; Stevenson's Treasure Island, or Kidnapped, or Master of Ballantrae; Cooper's Novels, any one; Poe's Selected Tales; Hawthorne's The House of the Seven Gables, or Twice Told Tales; or Mosses from an Old Manse; a collection of Short Stories by various standard writers.

Group IV—Essays, Biography, Etc.

Addison and Steele's The Sir Roger de Coverley Papers or Selections from the Tatler and Spectator (about 200 pages); Boswell's Selections from the Life of Johnson (about 200 pages); Franklin's Autobiography; Irving's Sketch Book (about 200 pages), or Life of Goldsmith; Southey's Life of Nelson; Lamb's Essays of Elia (about 100 pages); Lockhart's Life of Scott (about 200 pages); Thackeray's Lectures on Swift, Addison, and Steele in the English Humourists; Macaulay's Lord Clive, Warren Hastings, Milton, Addison, Goldsmith, Frederic the Great, Madame d'Arbuthnot (any one); Trevelyan's Life of Macaulay (about 200 pages); Ruskin's Sesame and Lilies, or Selections (about 150 pages); Dana's Two Years before the Mast; Selections from Lincoln including at least the two Inaugurals, the Speeches in Independence Hall and at Gettysburg, the Last Public Address and the Letter to Horace Greeley, together with a brief memoir or estimate of Lincoln; Parkman's The Oregon Trail; Thoreau's Walden; Lowell's Selected Essays (about 100 pages); Holmes's The Autocrat of the Breakfast Table; Stevenson's An Inland Voyage and Travels with a Donkey; Huxley's Autobiography and selections from Lay Sermons including the addresses on Improving Natural Knowledge, A Liberal Education, and A Piece of Chalk; a collection of Essays by Bacon, Lamb, DeQuincey, Hazlitt, Emerson, and other later writers; a collection of Letters by various standard writers.

Group V—Poetry

Palgrave's Golden Treasury (First Series): Books II and III, with special attention to Dryden, Collins, Gray, Cowper, and Burns; Palgrave's Golden Treasury (First Series), Book IV, with special attention to Wordsworth, Keats, and Shelley (if not chosen for study under B); Goldsmith's The Traveller and The Deserted Village; Pope's The Rape of the Lock; a collection of English and Scottish Ballads, and

example, some Robin Hood ballads, The Battle of Otterburn, King Estmere, Young Beichan, Bewick and Grahame, Patrick Spens, and a selection from later ballads; Coleridge's The Ancient Mariner, Christabel, and Kubla Khan; Byron's Childe Harold, Canto III or IV, and The Prisoner of Chillon; Scott's The Lady of the Lake, or Marmion; Macaulay's The Lays of Ancient Rome, The Battle of Naseby, The Armada, Ivry; Tennyson's The Princess, or Gareth and Lynette, Lancelot and Elaine, and The Passing of Arthur; Browning's Cavalier Tunes, The Lost Leader, How they Brought the Good News from Ghent to Aix, Home Thoughts from Abroad, Home Thoughts from the Sea, In the Camp of the French, Hervé Riel, Pheidippides, My Last Duchess, Up at a Villa—Down in a City, The Italian in England, The Patriot, The Pied Piper, "De Gustibus"—, Spenser's Tyrannus; Arnold's Sohrab and Rustum, and The Forsaken Merchant; Selections from American Poetry, with special attention to Poe, Lowell, Longfellow, and Whittier.

B. This part of the requirement is intended as a natural and logical continuation of the student's earlier reading, with greater stress laid upon form and style, the exact meaning of words and phrases, and the understanding of allusions. The books provided for study are arranged in four groups, from each of which one selection is to be made.

Group I—Drama

Shakespeare's Julius Cæsar, or Macbeth, or Hamlet.

Group II—Poetry

Milton's L'Allegro, Il Penseroso, and either Comus or Lycidas; Tennyson's The Coming of Arthur, The Holy Grail, and The Passing of Arthur; the selections from Wordsworth, Keats, and Shelley in Book IV of Palgrave's Golden Treasury (First Series).

Group III—Oratory

Burke's Speech on Conciliation with America; Macaulay's Two Speeches on Copyright, and Lincoln's Speech at Cooper Union; Washington's Farewell Address, and Webster's Firstunker Hill Oration.

Group IV—Essays

Carlyle's Essay on Burns, with a selection from Burns's poems; Macaulay's Life of Johnson; Emerson's Essay onanners.

Ancient History to the Coronation of Charlemagne with

special reference to the history of Greece and Rome. (Myer's Ancient History or Equivalent.)

Medieval and Modern History, a year's work based on text-book, but including reference reading and note-book work. (Myer's Middle Ages and Myer's Modern Age equivalent.)

English History, including text, reference and note-book work for one year (Andrews's History of England equivalent.)

United States History and Civil Government. (Channing's Students' History and Ashley's Federal State equivalent.)

Greek lessons and grammar.

Xenophon, four books of the Anabasis, and composition.

Homer, three books of the Iliad, with prosody; ability read easy Greek at sight.

Latin lessons and grammar.

Cæsar, Commentaries (Books I-IV).

Cicero, seven orations, including those against Catiline and for the poet Archias, and the Manilian Law.

Virgil, six books of the Aeneid and prosody.

Grammar, composition and sight reading are required a portion of each year's work.

Elementary French. One year of French; elements grammar; ability to write at dictation and to translate from English; reading of about one hundred and fifty pages text.

Intermediate French. Additional work in French, amounting to one year's advanced work in translation and composition.

Advanced French. The ability to read at sight any piece of modern prose or poetry and to write in French a paper on an assigned subject.

Elementary German. One year of German, elements grammar; ability to write at dictation and to translate from English; reading of about one hundred and fifty pages text.

Intermediate German. Additional work in German amounting to one year's advanced work in translation and composition.

Advanced German. The ability to read at sight any piece of modern German prose of moderate difficulty and to write in German a paper on an assigned topic.

Spanish (1 or 2 units). Including an accurate knowledge of the essentials of grammar, ability to write ordinary Spanish and to read ordinary Spanish prose.

Elements of Algebra, with special attention to factoring and solution of equations, and including ratio and proportion. Algebra ($\frac{1}{2}$ unit), being a continuation of the course in elements of Algebra with special emphasis on algebraic theory.

Algebra ($\frac{1}{2}$ unit). Quadratics and indeterminate equations, irrational and imaginary numbers, ratio, proportion and variations, in review; also theory of exponents, progressions, undetermined co-efficients and logarithms.

Plane Geometry, with original exercises and problems in mensuration.

Solid Geometry ($\frac{1}{2}$ unit). With original exercises and problems.

Trigonometry ($\frac{1}{2}$ unit). Elementary course in plane trigonometry.

Physics, covering an elementary knowledge of dynamics, sound, light, heat, magnetism and electricity; recitation and laboratory work.

Chemistry, including classroom and laboratory work in the elements of chemistry as presented in modern standard textbooks on the subject. At least five exercises a week for one year.

Physical Geography, covering the descriptive and explanatory study of the commoner phenomena of nature, including satisfactory laboratory and field work.

Botany, covering the morphology and simpler physiology of the higher plants, including some acquaintance with the local flora.

Zoology, emphasizing, in a general course, scientific methods and training rather than facts.

Extra Entrance Credits

If by examination or by certificate, a student presents more than fifteen units of commended work for admission he may, after the lapse of a semester and upon formal application, receive college credit for certain subjects, provided that these subjects, or others closely allied, have been continued in college with high grade, one unit of commended work being allowed three hours of college credit. Extra credit is thus allowed only in foreign language, advanced mathematics and advanced science. Credit, varying in amount with the individual courses, is granted for graduate work in approved high schools.

Requirements for Graduation

Bachelor of Arts Degree

The courses of study offered by the College lead to degree of Bachelor of Arts.

These courses include certain required studies, but a wide range of electives in language and literature, philosophy, economics, history, mathematics, science and arts.

Hour Requirements

One hundred and twenty-six hours of work are required for graduation. An "*hour*" consists of one recitation or lecture period, or one laboratory period a week for one semester. A recitation or lecture period covers fifty-five minutes; a laboratory period covers, in general, the time of three such periods. Six hours of the one hundred and twenty-six are in Physical Education. In order to complete the course in four years one must take an average of fifteen hours of academic work per semester throughout the four years.

Credit Requirements

In addition to the requirements of hours, as stated above, there is required for promotion from class to class and for graduation a certain number of "credits." Details regarding credits are published in the "Manual of Procedure."

Graduation With Honors

Those students who have two hundred and twenty or more credits are graduated with the honor *laude*; those who have two hundred and eighty-two or more credits are graduated with the honor of *magna cum laude*; and those who have three hundred and ten or more credits are graduated with the honor *summa cum laude*.

Group Requirements

In the selection of his work the student is given a large degree of choice. The only limitations are such as will inure to him, on the one hand, the breadth of view which may be gained by an introductory study of each of the great fields of knowledge; and, on the other, that concentration upon some chosen line of work which shall develop power of thought and an actual fund of knowledge in some particular field. To this end the student will select a limited amount of work from each of certain groups. Some of these courses because of their value in mental training and as the basis for later work are placed in the Freshman and Sophomore years.

Further details concerning these courses may be found under "Departments of Instruction."

Subject Requirements

English Composition—4 hours, Freshman year.

English Literature—6 hours, Freshman or Sophomore year.

French or German—12 hours, Freshman and Sophomore years.

History—6 hours, Freshman or Sophomore year, except those who enter with credit for three units of History.

Mathematics—6 hours, ordinarily Freshman year, except those who enter with credit for three units of Mathe-

matics. Such may substitute a year of work in science for the required mathematics; but this may not be used to meet the requirement in science immediately following.

Physics, Chemistry, Zoology, Botany or Physiology—6 hours, Freshman or Sophomore year. A student who enters with only one unit of science must take 6 hours of another line of science and, in general, it is expected that one must take in college at least 6 hours in science in a different line from any presented for entrance.

Physical Education—4 hours in Freshman and Sophomore years and 2 hours in Junior and Senior years.

Literature, English or Foreign—6 hours, Junior or Senior year. This cannot be met by a first-year course in language.

Economics—6 hours, usually Sophomore or Junior year.

Philosophy and Psychology—6 hours, Sophomore or Junior year.

In addition to these requirements, there is a general requirement of 36 hours of C and D work of which at least 9 must be D work.

Students who have shown special ability in one line of work may, with the consent of the head of the department, enroll for a departmental major. This major includes, usually, at least 18 hours in the department chosen, together with certain courses in allied subjects, and usually a reading knowledge of French and German. The student plans his work in consultation with the head of the department as well as with his class adviser. Certain prerequisites, differing with the subject chosen, are indicated for each major. A final examination or thesis or both may be required.

Students who desire to become candidates for a departmental major should indicate such intention as early as possible, and must be registered as candidates for such a departmental major not later than the first week of registration in their Senior year.

The student who completes a departmental major receives, in addition to his diploma, the special commendation of the department.

Curriculum

An outline of the work which leads to graduation is here given by years. Following this scheme is a *list* of the definite courses from which the work may be chosen. A more complete *description* of each course may be found under "Departments of Instruction."

Each "*hour*" represents one recitation or laboratory period a week for one semester.

Freshman Year

32 to 36 hours

Science	2 hours
Physical Education	2 hours
English Composition	4 hours
French or German	6 hours
History ¹ or English Literature ² , or Greek, or Latin	6 hours
Mathematics ³	6 hours
Elective from the above or from Art, Bible, Biology, Chemistry, Engineering, English, Music or Physics.	6 hours

Sophomore Year

32 to 36 hours

Physical Education	2 hours
French or German ³	6 hours
English Literature ² or History ¹	6 hours
Physics, Chemistry, Botany, Physiology or Zoology ⁴	6 hours
Elective from the above or from Art, Bible, Engineering, Economics and Sociology ⁵ , Mathematics, Music, Psychology and Philosophy ⁵ or Spanish	12 hours

Must be taken in Freshman or Sophomore year, unless 3 units of History have been accepted for entrance.

Must be taken in Freshman or Sophomore year.

Must continue any language begun in Freshman year.

Unless the Science requirement was met Freshman year.

Since 6 hours each of Economics and Sociology, and of Psychology and Philosophy must be taken during the course, it is recommended that one of these subjects be elected in Sophomore year.

A science may be substituted, if 3 units of Mathematics have been presented for entrance, but this may not be counted as fulfilling the general science requirement.

Junior and Senior Years

Physical Education	2 h
Economics and Sociology ¹	6 h
Philosophy and Psychology ¹	6 h
Literature ²	6 h
Elective ³	42 h

¹Unless already taken.

²Not including a first-year course in language.

³At least 9 hours being in D courses, and not over 6 in B courses.

List of Courses¹*Open to Freshmen (and Sophomores)*

- Art A1 and A2, Elementary Course (6).
 Biblical Literature A1 and A2, Contents of the Bible (2).
 Biology A1-A2, General Biology (6).
 Chemistry A1, Elements of Chemistry (4).
 A2, Inorganic Chemistry (3).
 B3 and B4, General Inorganic; Inorganic Preparations (5).
 B5 and B6, Qualitative Analysis (4).
 Engineering A1 and A2, Graphics (4).
 English A1 and A2, American Literature (6).
 A21 and A22, Composition (4).
 A35 and A36, Elementary Public Address (4).
 B3 and B4, History of English Literature (6).
 B3a, Mediaeval Literature (3).
 French A1-A2, Elementary Course; Modern Prose Drama (6).
 B3-C4, Nineteenth Century Novel (6).
 B3' and C4', Composition (4).
 German A1 and A2, Elementary Course (6).
 B1' and B2', Composition (2).
 B3, Prose Narrative and Drama (3).
 B4, Schiller (3).
 B3' and B4', More Advanced Composition (2).
 C19 and C20, Advanced German Prose (6).
 Greek A1 and A2, Elementary Greek (6).
 B3-B4, Lysias; Plato (6).
 B3' and B4', Composition (2).
 History A7-A8, English History (6).
 A13 and A14, Ancient Classical (6).

¹Courses connected by a dash may be taken separately; those connected by "and" are to be taken consecutively.

*Courses starred are not given in 1915-1916.

- n A1 and A2, Elementary Latin (6).
 A3 and A4, Vergil; Cicero (6).
 B5-B6, Cicero and Livy; Horace (6).
 B5' and B6', Composition (2).
 hematics A1-A2, Solid Geometry; Plane Trigonometry
 (6).
 A3 and B4, Algebra (6).
 A5 and A6, Elementary Analysis (6).
 A9-A10, Algebra; Trigonometry (6).
 B7-B8, Analytic Geometry and Calculus (8).
 B7a-B8a, Analytic Geometry; Calculus (6).
 ic A1 and A2, Elementary Course (4).
 sical Education A1 and A2, Gymnastics (2).
 A11 and A12, Gymnasium Practice (2).
 sics B1-B2, Mechanics and Sound; Heat, Magnetism,
 Electricity and Light (8).
 siology A1 and A2, Applied Physiology and Hygiene (2).
 B19 and B20, Folk and National Dances (2).

List of Courses

Open to Sophomores (and Upperclassmen)

- ll B courses listed above and such A courses as are per-
 mitted by classification adviser.
 B3-B4, Still Life, Perspective, Composition (6).
 ical Literature B3 and B4, Preservation and Transmis-
 sion of the Bible (2).
 B21 and B22, Ancient Oriental History and Liter-
 ature (6).
 any B21-B22, General Botany (6).
 mistry C7 and C8, Elementary Quantitative Analysis (6).
 C9 and C10, Organic Chemistry (6).
 nomics B1 and B2, Introduction to Economics (6).
 B21 and B22, Elements of Sociology (6).
 ineering B3 and B4, Graphics (4).
 C11 and C12, Surveying (6).
 lish B3 and B4, History of English Literature (6).
 B3a, Mediaeval Literature (3).
 B23, Composition (3).
 B24a and B24b, Composition (4).
 B31, Argumentation (3).
 B32, Public Address (3).
 man C9-C10, Nineteenth Century Novel (6).
 C9' and C10', Composition and Conversation (2).

- Greek B13 and B14, Greek Literature and Life (6).
 C5-C6, Aeschylus and Sophocles; Demosthenes
 History B1-B2, Mediaeval; the Renaissance and Reformation (6).
 Latin C7-C8, Pliny; Plautus (6).
 C7' and C8', More Advanced Composition (2).
 Mathematics B13-B14, Analytic Geometry and Calculus
 C15-C16, Descriptive Geometry and Perspective
 C17 and C18, Advanced Analytic Geometry and Calculus (6).
 Music B3 and B4, History and Appreciation (6).
 B5 and B6, Harmony (6).
 Philosophy B21-B23 or B24, Logic and Ethics (6).
 Physical Education B3 and B4, Gymnastics (2).
 B13 and B14, Gymnasium Practice (2).
 B19 and B20, Folk and National Dances (2).
 Physics C3-D4, Mechanics of Solids and Fluids, and Heat
 Physiology B3 and B4, Anatomy and Physiology (6).
 Psychology B1-B2, Elements of Psychology (6).
 B3 and C4, Principles of Psychology (6).
 Spanish B21-B22, Elementary Course; Modern Prose
 Drama (6).
 Zoology B11-B12, General Zoology; Vertebrate Morphology (6).
 B18, Entomology (3).
 C31-C32, Systematic Vertebrate Zoology (6).
 C34, Cytology and Comparative Embryology (3).

List of Courses

(In addition to above courses)

Open to Seniors and Juniors

- Art B11-B12, History of Art (6).
 C5-C6, Anatomy; Drawing from Life (6).
 C9 and C10, Art Appreciation (2).
 D7-D8, Figure from Life in Charcoal; Head and Life in Oil (6).
 Astronomy B1 and B2, General Astronomy (6).
 C3-D4, Descriptive; Theoretical and Practical (3).
 D6, Astrophysics (3).
 C7 and C8, Astronomical Seminar (2).

- ical Literature C5-C6, Old Testament Introduction; New Testament Introduction (2).
 C7 and C8, The Teachings of Jesus (2).
 C23-C24, Hebrew History and Jewish and Early Christian History and Literature (6).
 D25-D26, History of Religions; History of Christianity (6).
 C31-C32, Hebrew Grammar; Hebrew Readings (6).
 C33-D42, Poetry of the Bible; Semitic Institutions and Culture (6).
 any C23, Physiology (3).
 C24, Sub-tropical Horticulture (2).
 C25-D26, Mycology; Pathology (6).
 D27-D28, Phaenogamic Botany (6).
 C30, Plant Propagation (3).
 D31 and D32, Special Mycology (6).
 chemistry C7 and C8, Elementary Quantitative Analysis (6).
 C9 and C10, Organic Chemistry (6).
 C15 and C16, Agricultural Chemistry (6).
 D11 and D12, Mineral Chemistry (6).
 D13, Organic Preparations (3).
 D17, Advanced Quantitative Analysis (3).
 D18, Advanced Quantitative Analysis (3).
 D19 and D20, Special Advanced Chemistry (2).
 D21 and D22, Physical Chemistry (6).
 Constitutional History D9 and D10, Comparative Constitutional History (6).
 D11 and D12, American Constitutional History (6).
 Economics and Sociology B3, Principles of Economics (3).
 C5-C6, Money and Banking; Public Finance (6).
 D7-C8, Corporation Economics; Problems of Labor (6).
 D10, Transportation (3).
 D19 and D20, Applied Sociology (2).
 C25-C26, Poor Relief; Criminology (6).
 D27-C28, Theories of Social Reform; City Problems (6).
 D30, Immigration (3).
 Engineering D13 and D14, Applied Mechanics (6).
 English D5-D6, Shakespeare and Early Contemporaries; Shakespeare and Later Contemporaries (6).
 C7-C8, Essayists from Bacon to Arnold; English Novel (6).
 C9-C10, British Poets; British Poets of the Victorian Period (6).
 D12, History of the English Drama to 1462 (3).

- C25-C26, Journalism; Essay (6).
 D27-C28, Literary Criticism; the Short Story
 C33, Advanced Argumentation (3).
 C34a and C34b, Practical Public Speaking (4).
 C41-D42, Anglo-Saxon; Beowulf (6).
 D44, Chaucer (3).
 C19, English Poetry of Victorian Age (3).
 D20, Present Day English Poetry (3).
French D5-D6, Classic Drama; Prose of the Seventeenth Century (6).
 D7-D8, Literature of the Eighteenth Century; Romantic School (6).
 D7' and D8', Conversation and Advanced Composition (4).
Geology B1 and B2, Geology (6).
German C9 and C10, Novel of the Nineteenth Century (6).
 C9' and C10', Composition and Conversation (2).
 D5-D6, Lessing, Goethe (6).
 D7-D8, History of German Literature from Lessing to Goethe (6).
 D11-D12, Scientific German; Composition (6).
Greek C7-D8, Hellenistic Greek; Homer (6).
 D9-D10, Plato; Thucydides (6).
 D11 and D12, Composition and Sight Reading (6).
History C3-D4, Europe in the Eighteenth Century; Europe in the Nineteenth Century (6).
 D5 and D6, American Social and Political History (6).
 C15-D16, Modern Asiatic History; History of South America (6).
Italian B31-B32, Elementary (6).
 C33-D34, Classics (6).
Latin D9-D10, Cicero; Catullus, Lucretius, Tibullus, Propertius, Ovid and Lucan (6).
 D11-D12, Tacitus; Vergil (6).
 D13 and D14, Composition (2).
Law B1 and B2, Elementary Law; Contracts (6).
 C3 and C4, Elementary Law, Pleading, Evidence (6).
 C17 and D18, American Diplomacy and International Law (6).
Mathematics C17 and C18, Advanced Analytic Geometry and Calculus (6).
 C19, Differential and Integral Calculus (3).
 D20, Theory of Equations (3).
 D21 and D22, Higher Analysis (6).

- D24, Differential Equations (3).
 D25 and D26, Analytic Mechanics (6).*
 D27 and D28, Projective Geometry (6).
 C7 and C8, Composition I (6).
 D9 and D10, Composition II (6).*
 C11 and B12, Form (6).
 sophy C25-C26, Ancient and Mediaeval Philosophy;
 Modern Philosophy (6).
 D27-D28, Introduction to Philosophy; Metaphysics
 (6).
 C32, Principles of Ethics (3).
 D29-D30, Philosophy of Religions; Modern Philo-
 sophical Problems (6).*
 ical Education C5 and C6, Sports (1).
 C15 and C16, Sports (1).
 C7 and C8, Sports (1).
 C17 and C18, Sports (1).
 C21 and C22, Folk and National Dances (1).
 C23 and C24, Aesthetic Dances (1).
 C25 and C26, Gymnasium Practice (1).
 ics C3-D4, Mechanics of Solids; Mechanics of Fluids
 and Heats (6).
 C5-D6, Sound and Light; Magnetism and Elec-
 tricity (6).*
 C9 and C10, Physical Measurements (6).
 iology D5-D6, Histology; Embryology (6).
 B11 and B12, Public Hygiene.
 B13 and B14, Problems of Heredity and Eugenics.
 hology C6, Advanced Psychology (3).
 C7-D8, Educational Psychology; History of Edu-
 cation (6).
 ish C23-C24, Contemporary Spanish Novel (6).
 C23' and C24', Commercial Correspondence (2).
 D25-D26, Classic Drama; Prose of the Sixteenth
 and Seventeenth Centuries (6).
 gy C31-C32, Systematic Invertebrate Zoology; System-
 atic Vertebrate Zoology (6).
 D13-D14, Advanced Zoology; Bionomics (6).
 D15 or D16, Advanced Zoology (3).
 D19 and D20, Special Entomology (6).
 D33-C34, Comparative Neurology, Cytology and
 Comparative Embryology (6).

Advanced Work

While the College directs its attention primarily to undergraduate work it also desires to extend its opportunities to students seeking the earlier stages of graduate work whenever it can do so without sacrificing the interests of undergraduates. Only those are admitted who give promise of contributing a definite and inspiring influence to the life of the college. Such residence is therefore required as is deemed necessary to insure mutually helpful relations.

Master's Degree

In a few departments, where the facilities of the College warrant, limited numbers of students, whose undergraduate records show excellence of marked character, are accepted as graduate students in line for the Master's degree. Two hours of graduate work, consisting of a major in one department and a minor in the same, or a closely allied department together with a satisfactory thesis, are required. Details as to prerequisites and courses offered may be secured from Professor James A. Lyman, Chairman of the Committee on Graduate Work.

Music Certificate

The College gives a *Certificate of Proficiency in Music* on the completion of a satisfactory course in this department. In order to secure this certificate a student must show marked proficiency in a music major and general knowledge in a music minor; work in Piano being required in all. Proficiency in the major involves ability to perform competently and alone an entire program. This course includes besides the usual musical studies, certain courses in language, history, literature and philosophy.

Departments of Instruction

Order of Arrangement

The announcements of the Departments of Instruction are arranged in three divisions:

- Language, Literature, and Fine Arts (68)
 - Classical Languages and Literatures (68)
 - Greek (68) Latin (70)
 - Biblical Literature (72)
 - General Bible Study; Biblical History and Literature (72)
 - English (74)
 - English Language and Rhetoric (74)
 - English Literature (77)
 - Germanic Languages and Literatures; German (80)
 - Romance Languages and Literatures; French (83)
 - Spanish (85) Italian (86)
 - Fine Arts (87); Arts (87) Music (89)
- Mathematics, Physical and Biological Sciences (90)
 - Mathematics and Astronomy (90)
 - Mathematics (90) Astronomy (95)
 - Physics and Engineering (96)
 - Physics (96) Engineering (98)
 - Chemistry (99) Geology (104)
 - Biological Sciences (104)
 - General Biology, Zoology (105) Physiology (108)
 - Botany (109)
 - Physical Education (112)
- History, Social Sciences, and Philosophy (115)
 - History and Constitutional History (115)
 - History (115) Constitutional History (117)
 - Law (117)
 - Economics and Sociology (118)
 - Philosophy (120)
 - Psychology and Education (120) Philosophy (122)

Designation of Courses

The letter preceding the number in the designation of a course indicates in general its grade. Elementary courses designated by A (as Greek A1) are given in Freshman or Sophomore year; B courses are either those which follow the A courses of earlier years or the more advanced beginning courses; C and D courses are advanced courses given to Juniors and Seniors, D courses being the more difficult. The natural sequence of courses is from A to B, B to C, and C to D, and a student may not enter a C or D course without previous work in the same line.

To pass from an A course to a C course or from a B course to a D course requires a grade of A in the preceding elementary course.

Seniors may elect an A course only by permission of the Classification Committee, and with a prescribed discount in hours.

I. Language, Literature and Fine Arts

Classical Languages and Literatures

GREEK

A1 and A2. ELEMENTARY GREEK. (3 hours each.) A course designed for those wishing to begin the study of the Greek language after entering college. Grammar, composition, reading from the Anabasis of Xenophon, make it possible for those who complete the course with high grade to enter Greek B3 and B4 in their second year. Freshman and Sophomore years, both semesters. (May not be given in 1915-16.)

B3. LYSIAS. (3 hours.) Selected orations (Morgan).

- review of grammar and study of Greek life. Freshman and Sophomore years, first semester. M, W, F, at 9:30. Assistant Professor Robbins.
4. PLATO. (3 hours.) Apology and Crito with selections from Phaedo (Kitchel). Homer, Odyssey, three or four books; grammar. Freshman and Sophomore years, second semester. M, W, F, at 9:30. Assistant Professor Robbins.
- B3' and B4'. GREEK COMPOSITION. (1 hour each.) Reserved of those who make Greek their major. Freshman and Sophomore years, both semesters. Th, at 8:30. Assistant Professor Robbins.
- C1. AESCHYLUS AND SOPHOCLES. (3 hours.) Prometheus (Murray) and Oedipus the King (White.) Translations of other tragedies read in class; study of Haigh's Greek Theatricals; essays. Sophomore year, first semester. (Not given in 1915-1916.)
- C6. DEMOSTHENES. (3 hours.) Oration on the Crown (Cumprhays); outline of Greek literature; sight reading. Sophomore year, second semester. (Not given in 1915-1916.)
- C7. HELLENISTIC GREEK. (3 hours.) One of the Gospels and one of the Pauline Epistles; informal lectures on ancient manuscripts and the elements of textual criticism. Alternates with Greek C9. Junior and Senior years, first semester. (Not given in 1915-1916.)
- D8. HOMER. (3 hours.) Rapid reading of a number of books of the Iliad or Odyssey; the Homeric question. Alternates with Greek D10. Junior and Senior years, second semester. (Not given in 1915-1916.)
- D9. PLATO, PHAEDO AND PROTAGORAS. (3 hours.) Outline of Greek Philosophy. Alternates with Greek C7. Junior and Senior years, first semester. (Not given in 1915-1916.)
- D10. THUCYDIDES. BOOKS VI AND VII. (3 hours.) Alternates with Greek D8. Junior and Senior years, second semester. (Not given in 1915-1916.)
- D11 and D12. PROSE COMPOSITION AND SIGHT READING.

(1 hour each.) Required of all making Greek a major in Junior and Senior years, both semesters. (Not given 1915-1916.)

B13 and B14. GREEK LITERATURE AND LIFE. (3 hours each.) This course is open to those who have no knowledge of the Greek language. It is intended to give, through lectures and translations, some appreciation of the Greek genius and spirit, and some knowledge of the form and content of Greek literature. Though ordinarily a year course, it may, by special arrangement with the instructor, be taken for either semester. Sophomore and Junior years, both semesters. (Not given in 1915-1916.)

LATIN

A1 and A2. ELEMENTARY LATIN. (3 hours each.) This course is intended for those desiring to begin the study of Latin language after entering college. Grammar, composition, and readings from Caesar's Gallic War. Freshman year, both semesters. T, Th, S, at 7:30. Professor Colcord.

A3 and A4. VERGIL AND CICERO. (3 hours each.) Selections from the Aeneid and the Orations of Cicero. Freshman and Sophomore years, both semesters. M, at 9:30; F, at 2:00. Professor Colcord.

B5. CICERO AND LIVY. (3 hours.) Cicero; (Kelsey) Senectute and De Amicitia; Livy; (Westcott) Books X and XXII, selections; written translations, collateral reading, sight reading. Freshman year, first semester. T, Th, S, at 9:30. Professor Colcord.

B6. HORACE. (3 hours.) (Bennett) Odes, Epodes, Carmen Saeculare; Horatian meters; written translations, collateral reading, sight reading. Freshman year, second semester. T, Th, S, at 9:30. Professor Colcord.

B5' and B6'. LATIN COMPOSITION. (1 hour each.) Required of all making Latin their major. Freshman year, both semesters. F, at 11:15. Professor Colcord.

- . PLINY. (3 hours.) (Westcott) Letters. Tacitus, (Suetonius) Agricola and Germania. Collateral readings, history of Roman satire. Sophomore year, first semester. T, Th, S, at 8:30. Professor Colcord.
8. PLAUTUS. (3 hours.) Captivi, Trinummus. Terence. Adelphoi, Andria. Collateral readings, study of early Roman comedy and fragments of early Latin. Sophomore year, second semester. T, Th, S, at 8:30. Professor Colcord.
9. C7' and C8'. LATIN COMPOSITION. (1 hour each.) Connected narrative. Required of all making Latin their major. Prerequisites: Latin B5' and B6'. Sophomore year, both semesters. M, at 1:00. Professor Colcord.
9. CICERO. (3 hours.) Letters, Tusculan Disputations. Roman satire; Persius, Martial and Juvenal, selections. History of Roman satire. Junior and Senior years, first semester. (Not given in 1915-1916.) Professor Colcord.
10. CATULLUS; LUCRETIUS; TIBULLUS; PROPERTIUS; SENECA; LUCAN (Crowell.) (3 hours.) Selections. Topics in outline of Roman literature. Junior and Senior years, second semester. (Not given in 1915-1916.) Professor Colcord.
11. TACITUS. (3 hours.) Histories and Annals. Junior and Senior years, first semester. M, at 11:15; W, F, at 9:30. Professor Colcord.
12. VERGIL. (3 hours.) Bucolics and Aeneid, Books I-XII. Ovid. Selections. Christian and Latin Hymns. Junior and Senior years, second semester. M, at 11:15; W, F, at 9:30. Professor Colcord.
- D13 and D14. LATIN COMPOSITION. (1 hour each.) Original papers. Required of those making Latin their major. Prerequisites: Latin C7' and C8'. Junior and Senior years, both semesters. Hours to be arranged with the instructor. Professor Colcord.

Biblical Literature

GENERAL BIBLE STUDY

(Not less than four units are accepted for credit.)

A1 and A2. CONTENTS OF THE BIBLE. (1 hour each.) The purpose is to make the student acquainted with the contents of the English Bible. The material, style and purpose of the various facts will be discussed. Freshman year, both semesters. W, at 1:00. Professor Colcord.

B3 and B4. THE PRESERVATION AND TRANSMISSION OF THE BIBLE. (1 hour each.) A general study of the manuscripts, versions and other authorities, together with the history of biblical translations. Sophomore year, both semesters. W, at 3:00.

C5. OLD TESTAMENT INTRODUCTION. Historical and Literary Study of the Old Testament. (1 hour.) Lectures reading selected portions of the Old Testament narrative and the reading of a brief volume of Old Testament Introduction. Junior year, first semester. F, at 2:00. Professor Parker.

C6. NEW TESTAMENT INTRODUCTION. (1 hour.) An introduction to the historical study of the New Testament writings, purposing to give briefly the theories of origin of the various books and of the formation of the collection called "The New Testament." Junior year, second semester. F, at 2:00. Mr. Marriott.

C7 and C8. THE TEACHINGS OF JESUS. (1 hour each.) The sources of our knowledge of the life of Jesus, the critical problems involved in a study of these sources, and a systematic study of the life and teachings of Jesus in the light of his own day and ours. Lectures and text-books. Open to Seniors and to Juniors, with permission of instructor. Both semesters. F, at 1:00.

BIBLICAL HISTORY AND LITERATURE

B21 and B22. ANCIENT ORIENTAL HISTORY AND LITERATURE. (3 hours each.) The beginnings of the earliest civilization, and its development in the lands of the Bible.

environment, including Babylonia, Assyria, Egypt, Persia and Palestine. A background for a comprehensive study of Biblical History and Literature. Sophomore year, both semesters. M, at 2:00; W, F, at 8:30 Professor Stearns.

C23. HEBREW HISTORY AND LITERATURE. (3 hours.) From early Semitic times: in history, to the capture of Jerusalem by Titus; in literature, to the completion of the Old Testament canon. Junior and Senior years, first semester. (Not given in 1915-1916.) Professor Stearns.

C24. EARLY CHRISTIAN HISTORY AND LITERATURE. (3 hours.) The development during the first four centuries. Junior and Senior years, second semester. (Not given in 1915-1916.) Professor Stearns.

C28. CHRISTIAN MISSIONS. (3 hours.) History of efforts to extend the use of Biblical literature and belief, with special attention to modern missionary movements. Junior and Senior years, second semester. M, at 3:00; W, F, at 8:30. Professor Stearns.

D25. HISTORY OF RELIGIONS. (3 hours.) Development of the great religious systems of the world, with such ethical analysis as may be necessary for comparisons with Biblical values. The object is to widen historical information, and to emphasize the place the Bible holds in religion. Junior and Senior years, first semester. M, at 3:00, W, F, at 9:30. Professor Stearns.

D26. HISTORY OF CHRISTIANITY. (3 hours.) The historical development of Christianity into a world religion. Lecture course with required readings. Junior and Senior years, second semester. (Not given in 1915-1916.) Professor Stearns.

C31. HEBREW GRAMMAR. (3 hours.) A course for beginners. Exercises in reading and writing Hebrew. Prerequisite: A B course in either Greek, Latin or German. Junior and Senior years, first semester. To be given if selected by a sufficient number. Hours to be arranged with the instructor. Professor Stearns.

C32. HEBREW READINGS. (3 hours.) Translations representative selections from Old Testament Literature, enable the student to read the Hebrew Bible intelligently. Prerequisite: Biblical Literature, C31. Junior and Senior years, second semester. Hours to be arranged with instructor. Professor Stearns.

C33. THE POETRY OF THE BIBLE. (3 hours.) W, special study of portions of Isaiah, The Psalms, and Job. Junior and Senior years, first semester. M, at 3:00; W, at 9:30. Professor Stearns.

D42. SEMITIC INSTITUTIONS AND CULTURE. (3 hours.) Specialized studies in Semitic customs, arts and letters more or less connected with Old Testament history. Prerequisite: B22 or C23. Junior and Senior years, second semester. M, at 3:00; W, F, at 9:30. Professor Stearns.

Only one of the year courses D25 and C28, C31 and C33 and D42, will be given in 1915-1916.

English

ENGLISH LANGUAGE AND RHETORIC

Students who elect the English language as a major are required to offer English C41, D42 and D44; and, from the Department of English Literature, English B3a and B3b. Advice as to other work should be sought from the head of the Department. Students will be admitted to C and D courses in this Department who have done satisfactory work in B and C courses in the Department of English Literature.

A21 and A22. COMPOSITION. (2 hours each.) A study of the elements of effective prose composition. Lectures and analysis of illustrative specimens selected from masters of prose style to assist the student in securing a knowledge of the principles of good writing. These principles applied constantly in theme writing. Individual conferences with the instructor. Credit for English A21 is allowed only on the completion of English A22. Students deficient in English A21 and A22 may be required to take English B24. R

red in all courses; Freshman year, six divisions, two hours
week, both semesters. I. W, F, at 7:30; II. Th, S, at 7:30;
Th, S, at 9:30; IV. M, W, at 11:15; V. T, Th, at 11:15;
W, F, at 1:00. Professor Frampton, Assistant Profes-
Brown, Mr. Edwards.

A35 and A36. ELEMENTARY PUBLIC ADDRESS. (2 hours
h.) An elementary course designed to acquaint the stu-
t with his own needs. Frequent practice given in simple
ding, declamation, and extempore speaking. The aim is
make the voice and body responsive to thought and feel-
. Individual deficiencies pointed out, and modes of cor-
tion prescribed. Freshman year, both semesters. M, at
30; W, at 2:00. Mr. Edwards.

B23. COMPOSITION. (3 hours.) Introductory study of
e short-story, the essay, and literary criticism. Special
ention given to style. Frequent original work. Confer-
ces. Open only to those who have made a B grade or bet-
in English A21 and A22. Sophomore year, first sem-
er. M, at 3:00; W, F, at 9:30. Professor Frampton.

B24a and B24b. COMPOSITION. (2 hours each semester.)
course in continuation of English A21 and A22. For
ose who need further study of composition. May be re-
ired of any students deficient in English. Sophomore
ar, both semesters. T, Th, at 11:15. Professor Frampton.

C25. JOURNALISM. (3 hours.) A study of the forms and
ethods of newspaper writing. Special consideration of
orting, the news story, the special article, the editorial,
wspaper style, editing. Junior and Senior years, first
semester. (May not be given in 1915-1916.) Assistant Pro-
fessor Ament.

C26. ESSAY. (3 hours.) Analytical and constructive
udy of the essay; frequent original work. Special atten-
on to form and clearness of expression. Open to Sopho-
ores who attain an A grade in English B23. Junior and
enior years, second semester. (Not given in 1915-1916.)
ssistant Professor Ament.

D27. LITERARY CRITICISM. (3 hours.) A study of the practice of literary criticism in the nineteenth century with the purpose of formulating a thorough critical background for the study of literature. The theories and tenets of various schools are studied and their bearings pointed out. Lectures. Frequent practice in critical writing. Junior and Senior years, first semester. M, at 8:30; W, F, at 2:00. Professor Frampton.

D28. THE SHORT-STORY. (3 hours.) A study of the form and technic of the short-story. Study of American short-story writers. Frequent original work. Open to Sophomores who have had English B23. Junior and Senior years, second semester. M, at 3:00; W, F, at 9:30. Professor Frampton.

B31. ARGUMENTATION. (3 hours.) A study of the elements of argumentation, the analysis of propositions, evidence and drawing of briefs. Practice debates. Sophomore year, first semester. T, Th, S, at 8:30. Mr. Edwards.

B32. PUBLIC ADDRESS. (3 hours.) A study of the forms of public address. The ends of speech such as clearness, action, and belief are taken up to determine selection of material and method of presentation. The aim is to give the student reasonable control of himself before an audience while effectively presenting clear and convincing thoughts. Lectures. Frequent speaking before the class. Prerequisite to English C34. Sophomore year, second semester. T, Th, S, at 8:30. Mr. Edwards.

C33. ADVANCED ARGUMENTATION. (3 hours.) A study of the principles of argumentation, the tests of evidence, bringing and the structure of the forensic. Of especial value to those looking forward to the law as a profession. (May be given in 1915-1916.) Junior and Senior years, second semester. M, at 8:30; W, F, at 2:00. Professor Frampton.

C34a and C34b. PRACTICAL PUBLIC SPEAKING. (2 hours each.) The extempore method is used to train in the rapid formulation of thought and its attractive and effective

sentation. Current topics and questions of general interest are assigned in advance as material for the class discussion, but the choice of language is left largely to the student of speaking. Other topics are assigned at the time of speaking. Prerequisite: English B32. Junior and Senior years, both semesters. W, F, at 11:15. Mr. Edwards.

C41. ANGLO-SAXON. (3 hours.) A study of Anglo-Saxon grammar and the selections in Bright's "Reader." Required of students whose major is English. Given in alternate years. Junior and Senior years, first semester. (Not given in 1915-1916.) Professor Frampton.

D42. BEOWULF. (3 hours.) A study of the text of Beowulf and of Anglo-Saxon versification. Lectures. Required of those whose major is the English language. Prerequisite: English C41. Given in alternate years. Junior and Senior years, second semester. (Not given in 1915-1916.) Professor Frampton.

D44. CHAUCER. (3 hours.) A linguistic and literary study of Chaucer. Lectures. Thesis. It is desirable, though not necessary, that those who elect this course shall have had English C41 and English B3a. Given in alternate years. Required of those whose major is the English language. Junior and Senior years, second semester. T, Th, S, at 8:30. Professor Frampton.

ENGLISH LITERATURE

Courses in English Literature A1 and A2 are provided for Freshmen who enter with less than four years of preparatory literature. Freshmen with credits in English history and with four years of preparatory literature, may register in courses B3, B3a and B4.

A1 and A2. NINETEENTH CENTURY ENGLISH AND AMERICAN LITERATURE. (3 hours each.) Characteristic literary forms and writers of the century. Special attention to those prose productions reappearing in other departments, as

history, oratory, and argument. Intensive study of selected masterpieces. Freshman year, both semesters. T, Th, at 8:30, or T, Th, S, at 9:30. Professor Stearns.

B3 and B4. HISTORY OF ENGLISH LITERATURE. (3 hours each.) Historical backgrounds, material and development of English literature from its beginning to end of eighteenth century. Lectures, class discussions, and individual papers. Prerequisite: English history and four years or its equivalent of preparatory English literature. Sophomore and Freshman years, both semesters. T, Th, S, at 8:30, or Th, S, at 11:15. Professor Spalding.

B3a. MEDIAEVAL LITERATURE. (3 hours.) A course in comparative literature in translation with special attention to the relations between England and the continent. May be taken instead of English B3 to meet the literature requirement. Required of those who major in the English language, as prerequisite to English D44. Open to those who have a knowledge of English history. Sophomore year first semester. T, Th, S, at 8:30. Professor Frampton.

B13 and B14. GREEK LITERATURE AND LIFE. (3 hours each.) The same as Greek B13 and B14. In exceptional cases this course may be substituted for B3 or B3a and B4. (Not given in 1915-1916.) Professor Norton.

Two semester-courses provided in Shakespeare, arranged in logical sequence. Either course may be taken without the other. Both courses required for those whose major is English literature.

D5. SHAKESPEARE'S COMEDIES AND CHRONICLE PLAYS. (3 hours.) Lectures upon Shakespeare's relation to historical and dramatic influences of the Elizabethan period. Study from each group of selected plays distinctive of Shakespeare's early material and development. Prerequisite: English B3 or B3a, and B4. Junior and Senior years, first semester. M, at 2:00; W, F, at 8:30. Professor Spalding.

D6. SHAKESPEARE'S TRAGEDIES AND ROMANCES. (3 hours.) Lectures upon Shakespeare's mature genius and dramatic

t. Analytical and interpretative study of representative dramas from each group. Prerequisite: English B3 or B3a and B4. Junior and Senior years, second semester. M, at 10:00; W, F, at 8:30. Professor Spalding.

D12. HISTORY OF THE ENGLISH DRAMA TO 1462. (3 hours.) A study of the development of the English drama from its beginning to the closing of the theatres by the Puritans. Attention is given chiefly to the immediate predecessors, contemporaries and successors of Shakespeare. Junior and Senior years, second semester. M, at 8:30; W, F, at 10:00. (May not be given in 1915-1916.) Professor Frampton.

One course in English prose, either C7 or C8, is required of all whose major is English literature.

C7. ENGLISH ESSAYISTS FROM BACON TO ARNOLD. (3 hours.) Historical development with analytical and interpretative study of selected essays. Junior and Senior years, first semester. (Not given in 1915-1916.) Assistant Professor Ament.

C8. ENGLISH NOVEL. (3 hours.) Careful reading of twelve to fifteen classic novels, with interpretative and critical study of a few. This course presupposes a fair acquaintance with Victorian fiction. Junior and Senior years, second semester. (Not given in 1915-1916.) Assistant Professor Ament.

Two courses in English poetry, one of which shall be C9, are required of those whose major is English literature. Under exceptional conditions C10 or C19 may be given as D courses.

C9. ENGLISH POETRY FROM MILTON TO POPE; POETICS. (3 hours.) Lectures upon the scientific and artistic structure of English verse. Survey of Jacobean and Queen Anne periods. Intensive study of Milton and Pope. Prerequisite: English B3 or B3a and B4. Junior and Senior years, alternate years, first semester. T, Th, S, at 9:30. Professor Spalding.

C10. ENGLISH POETRY FROM BURNS TO WORDSWORTH. (3 hours.) Lectures upon development of Romanticism. Survey of periods from death of Pope to appearance of Tennyson. Special study of Wordsworth, Shelley, and Keats. Prerequisite: English B3 or B3a and B4. Junior and Senior years, alternate years, second semester. T, Th, S, at 9:30. Professor Spalding.

C19. ENGLISH POETRY OF VICTORIAN AGE. (3 hours.) Poetical trend and achievements of the century. Special study of Browning and Tennyson. Junior and Senior years, alternate years, first semester. (Not given in 1915-1916.) Professor Spalding.

D20. PRESENT-DAY ENGLISH POETRY. (3 hours.) Seminar study of recent poets most sensibly shaping and expressing contemporary poetical philosophy and usage. Open only to students who, with other prerequisites, have taken at least two courses in English poetry. Senior year, alternate years, second semester. (Not given in 1915-1916.) Professor Spalding.

Germanic Languages and Literatures

GERMAN

A1 and A2. ELEMENTARY COURSE. (3 hours each.) Intended especially for Freshmen who offer no modern language. By the constant use of the language in the classroom the student is stimulated from the outset to think in German. Thorough drill in grammar and composition throughout the year; memorizing of poetic and also prose selections; reading of a considerable body of simpler stories and poems. Freshman year, both semesters. M, at 3:00; W, F, at 9:30. Assistant Professor Matlock.

B3. PROSE NARRATIVE AND DRAMA. (3 hours.) Reading of more advanced short stories or a novel, and a drama. Grammatical analysis, short essays in German on assigned topics, sight reading, discussion of text in German, the stu-

being expected to grow in ability to use the language. Prerequisites: German A1 and A2 or two years elementary German. Freshman and Sophomore years, three divisions, first semester. I. M, at 1:00; W, F, at 7:30. II. M, at 2:00; W, F, at 8:30. III. M, at 8:30, W, F, at 2:00. Professor Bissell and Assistant Professor Matlock.

4. SCHILLER. (3 hours.) Reading of selected ballads and other poems of Schiller, *Lied von der Glocke*, and *Maria Stuart*. Prerequisite: German B3. Freshman and Sophomore years, three divisions, second semester. I. M, at 1:00; W, F, at 7:30. II. M, at 2:00; W, F, at 8:30. III. M, at 2:00; W, F, at 2:00. Professor Bissell and Assistant Professor Matlock.

5. C1' and B2'. GERMAN COMPOSITION. (1 hour each.) Simple prose narrative and conversation. Review of fundamentals of grammar. May be required of those deficient in German. Freshman and Sophomore years, both semesters. T, Th, at 11:15. Associate Professor Churchill.

6. C3' and B4'. GERMAN COMPOSITION. (1 hour each.) Advanced narrative prose, based on Wiehr's *Composition*. For students of good standing. Freshman and Sophomore years, both semesters. Th, at 11:15. Associate Professor Churchill.

7. C9. GERMAN NOVEL OF THE NINETEENTH CENTURY. (3 hours.) Lectures on the development of the German Novel. With readings from works of Haupt, Eichendorff, Freytag, and Gerlach. Prerequisites: German B3 and B4 or equivalent. Sophomore and Junior years, first semester. T, Th, at 7:30. Professor Bissell.

8. C10. GERMAN NOVEL OF THE NINETEENTH CENTURY. (Continued.) (3 hours.) Lectures continued; readings from the works of Ludwig, Spielhagen, Keller, Storm, Frensdorff. Prerequisite: German C9. Sophomore and Junior years, second semester. T, Th, S, at 7:30. Professor Bissell.

9. C9' and C10'. GERMAN COMPOSITION AND CONVERSATION. (1 hour each.) Required of those making German their

major. Prerequisites: German B3 and B4 or equivalent and German B3' and B4'. Sophomore and Junior years and first semester. W, at 3:00. Professor Bissell.

C19 and C20. ADVANCED GERMAN PROSE. (3 hours each) Reading of carefully selected addresses by Emperor Wilhelm, Carl Schurz, von Moltke, Bismarck and other men of note, and other selected reading, offering a rich and varied vocabulary in the general fields of political science, history, criticism and philosophy and science. Prerequisites: German B3 and B4. Freshman and Sophomore years, both semesters. T, Th, S, at 9:30. Assistant Professor Matlock.

D5. LESSING. (3 hours.) Lectures on Lessing's works and influence. Reading of his principal dramas and portions of Laocoon and other prose works. Prerequisites: German C9 and C10. Junior and Senior years, first semester. (Not given in 1915-1916.)

D6. GOETHE. (3 hours.) Lectures on Goethe's works and place in literature, relation to Schiller. Reading of Faust, Part I, and at least two other works. Prerequisite: German D5. Junior and Senior years, second semester. (Not given in 1915-1916.)

D7. OUTLINE COURSE IN THE HISTORY OF GERMAN LITERATURE AND LANGUAGE TO THE AGE OF LESSING. (3 hours) Lectures supplemented by assigned readings from the great medieval epics. Prerequisites: German C9 and C10 or equivalent. Junior and Senior years, first semester. M, W, F, at 11:15. Professor Bissell and Assistant Professor Matlock.

D8. CONTINUATION OF D7 FROM LESSING TO THE DEATH OF GOETHE. (3 hours.) Reading of representative works of Lessing, Schiller and Goethe. Prerequisite: German D7. Junior and Senior years, second semester. M, W, F, at 11:15. Professor Bissell and Assistant Professor Matlock.

D11. SCIENTIFIC GERMAN. (3 hours.) Based on Hodgson's Course and Brandt and Day's Reader. Assignments to the reading of works of scientific writers. Intended primarily for the

ning to do graduate work leading to the degree of Doctor of Philosophy. Prerequisites: German C9 and C10 or equivalent. Junior and Senior years, first semester. T, Th, at 8:30. Professor Bissell.

12. GERMAN COMPOSITION. (3 hours.) Advanced course required of all who desire the recommendation of the Department as teachers. Prerequisites: Two years of college German, including German C9' and C10'. Junior and Senior years, second semester. T, Th, S, at 8:30. Professor Bissell.

Romance Languages and Literatures

FRENCH

A1. ELEMENTARY COURSE. (3 hours.) Aldrich and Foster's Elementary French. Reading of easy prose and poetry; grammatical analysis, composition and dictation. Freshman and Sophomore years, three divisions, first semester. I. M, at 1:00; W, F, at 7:30. II. M, at 3:00; W, F, at 8:30. III. T, Th, S, at 11:15. Associate Professor Jones and Assistant Professor Pecker.

A2. MODERN PROSE AND DRAMA. (3 hours.) Continuation of French A1. Selected readings from Daudet, Coppée, Ibsen, Scribe and others. Grammatical reviews, composition and dictation; sight reading. Freshman and Sophomore years, three divisions, second semester. I. M, at 1:00; W, F, at 7:30. II. M, at 3:00; W, F, at 9:30. III. T, Th, S, at 11:15. Associate Professor Jones and Assistant Professor Pecker.

B3. FRENCH NOVEL OF THE NINETEENTH CENTURY. (3 hours.) Reading of selected masterpieces of DeVigny, Balzac, Sand, Daudet and others; lectures, essays and composition. Prerequisite: French A2 or equivalent. Freshman and Sophomore years, first semester. T, Th, S, at 7:30, or I, at 2:00; W, F, at 8:30. Assistant Professor Pecker.

C4. FRENCH NOVEL OF THE NINETEENTH CENTURY. (3 hours.) Continuation of French B5. Prerequisite: French B3 or equivalent. Freshman and Sophomore years, second semester. T, Th, S, at 7:30, or M, at 2:00; W, F, at 4:00. Assistant Professor Pecker.

B3' and C4'. FRENCH COMPOSITION. (2 hours each.) Prerequisites: French A1 and A2. Required of those majoring in Romance Languages their major. Freshman and Sophomore years, both semesters. M, W, at 11:15. Assistant Professor Pecker.

D5. CLASSIC DRAMA. (3 hours.) Reading of Corneille's *Polyeucte*, Racine's *Athalie*, Molière's *Tartufe*; essays on sight reading continued; lectures upon the literary history of the period. This course, and all to follow, are conducted entirely in French. Alternates with French D7. Prerequisites: French B3 and C4. Junior and Senior years, first semester. (Not given in 1915-1916.) Associate Professor Jones.

D6. FRENCH PROSE OF THE SEVENTEENTH CENTURY. (3 hours.) Selections from Bossuet, Descartes, Pascal, Bruyère, Mme. de Sévigné, etc.; essays and lectures upon the history of French literature, continued. Alternates with French D8. Prerequisites: French B3 and C4. Junior and Senior years, second semester. (Not given in 1915-1916.) Associate Professor Jones.

D7. LITERATURE OF THE EIGHTEENTH CENTURY. (3 hours.) Selections from Montesquieu, Voltaire, Rousseau, Beaumarchais, etc. Essays and sight reading; lectures upon the literary history of the period. Alternates with French D5. Prerequisites: French B3 and C4. Junior and Senior years, first semester. M, T, Th, at 4:00. Associate Professor Jones.

D8. ROMANTIC SCHOOL. (3 hours.) Readings from Hugo, Alfred de Musset, Lamartine, etc.; significance and influence of the Romantic movement; essays and lectures upon the history of French literature continued. Prerequisite: French D5.

: French B3 and C4. Alternates with French D6.
 or and Senior years, second semester. M, T, Th, at
 Associate Professor Jones.
 ' and D8'. CONVERSATION, PHONETICS AND ADVANCED
 POSITION. (2 hours each.) An advanced conversational
 se, required of those specializing in French, and must
 accompanied by a D course in literature. Junior and
 or years, both semesters. Hours to be arranged with
 instructor. Assistant Professor Pecker.

SPANISH

21. ELEMENTARY COURSE. (3 hours.) Hills & Ford's
 nish grammar. Padre Isla's Gil Blas de Santillana.
 versation, composition and dictation. Sophomore and
 ior years, first semester. T, Th, S, at 8:30. Assistant
 fessor Pecker.

22. MODERN PROSE AND DRAMA. (3 hours.) Alarcón's
 Capitán Veneno or El Sombrero de tres Picos; Eche-
 ay, O locura ó santidad; Bretón; Quién es ella? Bec-
 r's Tales and Poems. Conversation and dictation;
 mphrey's Spanish Prose Composition. Sophomore and
 ior years, second semester. T, Th, S, at 8:30. Assistant
 fessor Pecker.

23. CONTEMPORARY SPANISH NOVEL. (3 hours.) Selec-
 ns from the works of Galdós, Valdes, Blasco Ibañez and
 ers. Essays and résumés in Spanish; conversation based
 on Bonilla's Spanish Daily Life. Prerequisites: Spanish
 1 and B22 or equivalent. Sophomore and Junior years,
 st semester. T, Th, S, at 9:30. Associate Professor Jones.

24. CONTEMPORARY SPANISH NOVEL. (3 hours.) Con-
 uation of C3. Reading from Valera, Pereda, Pardo Bazan
 d others. Lectures in Spanish; essays and résumés.
 mphomore and Junior years, second semester. T, Th, S,
 9:30. Associate Professor Jones.

C23' and C24'. COMMERCIAL CORRESPONDENCE. (1 hour
 ach.) Prerequisites: Spanish B21 and B22. Required

of those specializing in Spanish. A course in advanced position and epistolary usages. Sophomore and Junior years, both semesters. Hours to be arranged with the instructor. Associate Professor Jones.

D25. THE CLASSIC DRAMA. (3 hours.) Selections from Lope de Vega, Tirso de Molina, Calderón de la Barca. Lectures upon the history of Spanish literature. This course as well as D26, conducted entirely in Spanish. Prerequisite: Spanish C24 or equivalent. Junior and Senior years, both semesters. M, W, F, at 11:15. Associate Professor Jones.

D26. SPANISH PROSE OF THE SIXTEENTH AND SEVENTEENTH CENTURIES. (3 hours.) Readings from Cervantes, El Quijote and the Novelas Ejemplares; the picaresque novel; Lazarillo de Tormes. Lectures continued. Prerequisite: Spanish C24 or equivalent. Junior and Senior years, second semester. M, W, F, at 11:15. Associate Professor Jones.

ITALIAN

B31. ELEMENTARY COURSE. (3 hours.) Young's Italian Grammar. De Amicis' Cuore; Goldoni's La Locandiera. Drill in pronunciation; composition and dictation. Junior and Senior years, first semester. M, at 9:30; W, F, at 3:00. Associate Professor Jones.

B32. ELEMENTARY COURSE. (3 hours.) Continuation of Italian B31. Manzoni's I promessi Sposi; Silvio Pellico's Le mie Prigioni; short stories and plays from modern authors. Grandgent's Italian prose Composition; conversation and dictation. Junior and Senior years, second semester. M, at 9:30; W, F, at 3:00. Associate Professor Jones.

C33. ITALIAN CLASSICS. (3 hours.) Boccaccio, Petrarch, Ariosto and Tasso. Lectures upon the history of Italian literature. Prerequisite: Italian B32 or equivalent. Junior and Senior years, first semester. T, Th, S, at 8:30. Associate Professor Jones.

B4. CLASSICS (Continued.) (3 hours.) Dante's *Inferno*, with selections from the *Purgatorio* and *Paradiso*. Villani's study of the *Divine Comedy*. Essays and lectures continued. Prerequisite: Italian B32 or equivalent. Junior and Senior years, second semester. T, Th, S, at 8:30. Associate Professor Jones.

Fine Arts

ART

Credit is given toward graduation for courses in art, provided the work is sufficiently advanced and the requirements met as to readings and attendance on lectures dealing with the history and theory of art. Three hours of credit involve two two-hour lessons in class and five hours of practice per week. Practice work is done in the studio, save as much time to time work outside is arranged by the instructor, and all practice work is criticized by the instructor. Attendance on lectures is substituted at times for one of the weekly practice hours.

All courses except Art B11 and B12 are given by Assistant Professor Jenkins, the head of the Department.

A1. (3 hours.) Drawing from casts and objects; painting in water colors over charcoal; color problems in hues, tints, intensities and values; painting still life from objects. Freshman year, first semester.

A2. (3 hours.) Design—pure and applied; landscape and flowers from nature in water color and pastels. Freshman year, second semester.

B3. (3 hours.) Drawing from cast—full-length figure; applied perspective; wash painting in water colors for architectural design. Sophomore year, first semester.

B4. (3 hours.) Designing book covers and commercial advertising; pen and ink rendering. Sophomore year, second semester.

C5. (3 hours.) Anatomy of head; drawing head from life in charcoal; head and figure in pen and ink; painting from still life in oil colors. Junior year, first semester.

C6. (3 hours.) Anatomy of full-length figure; particular attention given to construction rather than finishing drawings. Painting in oil colors. Junior year, second semester.

D7. (3 hours.) Drawing and painting; portrait figure from life; landscape from nature. Senior year, first semester.

D8. (3 hours.) Drawing and painting; portrait figure; flowers and landscape. Senior year, second semester.

B9 and B10. ART APPRECIATION. (1 hour each.) Lectures and assigned readings. The course covers the critical study of masterpieces, home decoration, church adornment and art in dress. The terminology and technique of the lines of art are fully discussed. Credit is given only when accompanied by Art B3 and B4, or C5 and C6, or D7 and D8, or by a special course in Art involving one two-hour lesson and four hours of practice work per week. For the special course two hours additional credit per semester is given. Prerequisites: Art A1 and A2. Sophomore, Junior and Senior years, both semesters. M, 11:15.

Courses in Graphics, Machine Drawing, Descriptive Geometry, and Perspective are described under the Department of Engineering.

B11. HISTORY OF ART. (3 hours.) Outline study of oriental and classical periods of architecture, sculpture and painting. Junior and Senior years, first semester. M, Th, at 4:00. Professor Spalding.

B12. HISTORY OF ART. (3 hours.) Outline study of Gothic and renaissance architecture, sculpture and painting. Junior and Senior years, second semester. M, T, Th, at 4:00. Professor Spalding.

MUSIC

A1 and A2. **ELEMENTARY MUSIC AND EAR TRAINING.** (2 hours each.) A course dealing with the rudiments of music, including notations, rhythm, intervals, scales and definitions in terms. Extended work in ear-training, aiming to teach discriminative listening, is conducted by an assistant. A text is used. Three recitations to count as two hours. Freshman and Sophomore years, two divisions, both semesters. I. T, Th, S, at 7:30. II. M, at 9:30; W, F, at 3:00. Assistant Professor Allen and Assistant.

B3 and B4. **MUSICAL HISTORY AND APPRECIATION.** (3 hours each.) Lectures are given on the development of music from its earliest stages. The history of church music, opera, and oratorio; biographical sketches of famous composers, with description of their principal works. Recitals, to aid in appreciation, are given bi-weekly. A textbook is used. Sophomore year, both semesters. M, at 8:30; F, at 2:00. Miss Clapp.

B5 and B6. **HARMONY.** (3 hours each.) A study of intervals, scales, chord construction and their relation. An abundance of excerpts are examined. Especial emphasis laid upon the harmonization of melodies, as well as practical application at the key-board of the principles involved. Creative work is encouraged from the beginning. The new text by Carolyn A. Alchin is used. Prerequisite: Music A1 and A2, and an elementary knowledge of the pianoforte. Sophomore and Junior years, both semesters. T, Th, S, at 11:15. Assistant Professor Allen.

C7 and C8. **COMPOSITION I.** (3 hours each.) The first semester will be devoted to a study of Simple Counterpoint of all species in two, three and four voices. The aim is to develop technique in smooth voice leading. Creative work in the simpler forms of Free Composition is undertaken in the second semester. Prerequisite, Music B5 and B6. Junior and Senior years, both semesters. T, Th, S, at 9:30. Assistant Professor Allen.

D9 and D10. COMPOSITION II. (3 hours each.) Original work leading up to the Sonata form constitutes the basis of this course. Prerequisite: Music C7 and C8. Junior and Senior years, both semesters. (Not given in 1915-1916.) Assistant Professor Allen.

C11. FORM. (3 hours.) The essentials of Form in musical composition: sentence, phrase, motif, rhythm and modulation. Synthetical study of simple forms. Analysis of Canon, Fugue, Sonata, etc., and study of chamber music. A text book is used. Prerequisites: Music B5 and B6. Junior and Senior years, first semester. M, W, F, at 11:15.

B12. MUSICAL APPRECIATION. (3 hours.) A course covering musical appreciation may be given the second semester if there is demand. No prerequisites. M, W, F, at 11:15.

II. Mathematics, Physical and Biological Sciences

Mathematics and Astronomy

MATHEMATICS

The courses in mathematics designated A1 and A2, A3 and A4, A5 and A6, A9 and A10, and B7 and B8 are intended primarily for Freshmen. Students who enter with credit for three and a half or four units of commended work in mathematics, including solid geometry and trigonometry, may take Mathematics B7 and B8, or B13 and B14. Mathematics B7 and B8 are required of students in engineering and recommended for advanced work in mathematics and physics. Students who wish to take further work in mathematics, but who have not sufficient preparation for the courses, may take Mathematics A1 and A2, or A3 and A4, or A9 and A10, according to their preparation and need. Mathematics A5 and A6 are intended primarily for those who do not expect to take further work in the subject.

A1. SOLID GEOMETRY. (3 hours.) The geometry of space with original exercises and problems. Freshman year, first semester. M, at 3:00; W, F, at 9:30; second semester, T, Th, S, at 11:15. Associate Professor Russell and Assistant Professor Brown.

A2. PLANE TRIGONOMETRY. (3 hours.) Essential principles and applications to problems in surveying. Freshman year. Second semester, M, at 3:00; W, F, at 9:30; first semester, T, Th, S, at 11:15. Associate Professor Russell and Assistant Professor Brown.

A3 and B4. ALGEBRA. (3 hours each.) Review of fundamental notions and operations, quadratic equations, ratio, proportion and variation, commensurable, incommensurable, and imaginary numbers, progressions, permutations and combinations, binomial theorem, series, undetermined coefficients, logarithms, determinants, theory of equations. Freshman year, both semesters. M, at 3:00; W, F, at 9:30. Associate Professor Russell.

A5 and A6. ELEMENTARY ANALYSIS. (3 hours each.) A theoretical and historical study of some of the most interesting principles of mathematical analysis. Freshman year. Two divisions, both semesters. M, at 2:00; W, F, at 8:30, or M, at 3:00; W, F, at 9:30. Assistant Professor Berry.

A9. ALGEBRA. (3 hours.) A semester course in the essentials of algebra. Freshman year, first semester. M, at 3:00; W, F, at 8:30. Associate Professor Russell.

A10. TRIGONOMETRY. (3 hours.) The elements of plane trigonometry with practical problems. Freshman year, second semester. M, at 2:00; W, F, at 8:30. Associate Professor Russell.

B7. ANALYTIC GEOMETRY AND CALCULUS. (4 hours.) A course in the elementary principles of graphical representation, the study of linear equations, and equations of the n th degree in a single variable, employing both the graph and the derivative in solution and discussion. Freshman

and Sophomore years, first semester. (Not given 1915-1916.)

B8. ANALYTIC GEOMETRY AND CALCULUS. (4 hours.) continuation of Mathematics B7 involving differentiation of algebraic and elementary transcendental functions, equations of the second degree, intersection of curves and transformation of co-ordinates, tangents and polars, polar coordinates, and curvature. Freshman and Sophomore year second semester. (Not given in 1915-1916.)

Mathematics B7 and B8 constitute the first half of consecutive, two-year course in mathematics comprising the essential principles of analytic geometry and calculus with their applications to curve tracing and to the solution of equations, and arranged in such a manner as to develop practical knowledge of the principles of mathematical analysis. The course involves the more important principles of algebra and trigonometry, but disregards the order and divisions in which these subjects are usually treated. It is based upon the text, "A Course in Mathematics," by Woods and Bailey. The second year of this course is given in Mathematics C17 and C18.

For the year 1915-1916 Mathematics B7a and B8a will be given in place of B7 and B8.

B7a. ANALYTIC GEOMETRY. (3 hours.) A course in plane analytic geometry designed especially for students of physics and engineering. Freshman and Sophomore year first semester. T, Th, S, at 11:15. Assistant Professor Belcher.

B8a. ANALYTIC GEOMETRY AND CALCULUS. (3 hours.) An introduction to differential calculus with applications to analytic geometry and mechanics. Designed to follow Mathematics B7a. Freshman and Sophomore years, second semester. T, Th, S, at 11:15. Assistant Professor Belcher.

C11 and C12. SURVEYING. (3 hours each.) The same as Engineering C11 and C12. Alternates with Mathematics

5 and C16. Sophomore and Junior years, both semesters. at 7:30; T, W, at 1:00. Assistant Professor Belcher.

B13. ANALYTIC GEOMETRY AND CALCULUS. (3 hours.) An elementary course in the principles of co-ordinate geometry and the introduction to the differential calculus. Designed to follow Mathematics A1 and A2, A3 and A4, or A9 and A10. Sophomore year, first semester. T, Th, S, at 9:30. Associate Professor Russell.

B14. DIFFERENTIAL AND INTEGRAL CALCULUS. (3 hours.) First course in the differential and integral calculus with applications chiefly to analytic geometry; designed to follow Mathematics B13. Sophomore year, second semester. T, Th, S, at 9:30. Associate Professor Russell.

C15. DESCRIPTIVE GEOMETRY. (3 hours.) Study and practice in the elements of projection and perspective; intersections of surfaces and solids. Alternates with Mathematics C11. Prerequisites: Engineering A1 and A2. Sophomore year, first semester. (Not given in 1915-1916.) Assistant Professor Belcher.

C16. PERSPECTIVE. (3 hours.) Principles of shades and shadows, of perspective and the perspective of shadows; much practice in perspective drawing. Alternates with Mathematics C12. Prerequisite: Mathematics C15. Sophomore year, second semester. (Not given in 1915-1916.) Assistant Professor Belcher.

C17 and C18. ADVANCED ANALYTIC GEOMETRY AND CALCULUS. (3 hours each.) Fundamental processes in integration with applications to analytic geometry and mechanics; functions of several variables and space co-ordinates; partial differentiation; differential equations. These courses constitute the second half of the two-year course referred to under Mathematics B7 and B8. Sophomore and Junior years, both semesters. M, at 2:00; W, F, at 8:30. Assistant Professor Belcher.

C19. DIFFERENTIAL AND INTEGRAL CALCULUS. (3 hours.) A continuation of Mathematics B14. Junior year, first sem-

ester. M, W, F, at 11:15. (May not be given in 1915-1916.) Associate Professor Russell.

D20. THEORY OF EQUATIONS. (3 hours.) Analysis of solution of higher algebraic equations; review of determinants with elementary reductions and processes, elimination and linear transformations. Alternates with Mathematics D24. Junior and Senior years, first semester. (May not be given in 1915-1916.)

D24. DIFFERENTIAL EQUATIONS. (3 hours.) A general course in the theory and solution of differential equations. Junior and Senior years, second semester. (May not be given in 1915-1916.) Associate Professor Russell.

The following cycle of courses is given to Juniors and Seniors: Mathematics D25 and D26, Mathematics D27 and D28, and some form of Mathematics D21 and D22. At present but one of the three courses is given each year.

D21 and D22. HIGHER ANALYSIS. (3 hours each.) This course is an extension of the more elementary analysis developed in Mathematics B7, B8, C17 and C18. Its content differs from year to year. Its purpose is by the study of the principles and methods of some of the great modern mathematicians like Cauchy, Riemann, Clebsch and Gauss in certain subjects like the theory of functions or the general theory of algebraic curves, to furnish an introduction to the realm of higher mathematics and to develop still further independence and power in sound mathematical reasoning. Junior and Senior years, both semesters. (Not given in 1915-1916.) Professor Brackett.

D25 and D26. ANALYTIC MECHANICS. (3 hours each.) Mathematical treatment of important principles in mechanics; applications to numerous problems; discussion of general application of analytic reasoning to other physical problems. Junior and Senior years, both semesters. (Not given in 1915-1916.) Professor Brackett.

D27 and D28. PROJECTIVE GEOMETRY. (3 hours each.) A deductive study of general projective geometry with applications.

n to the foundations of geometry. Junior and Senior years, both semesters. M, at 2:00; W, F, at 8:30. Professor Brackett.

ASTRONOMY

B1 and B2. GENERAL ASTRONOMY. (3 hours each.) A general course of lectures and recitations in descriptive astronomy with regular evenings at the observatory, and simple observations systematically recorded in notebooks. This course is designed for students who have had only elementary courses in physics, chemistry and trigonometry. Class room, two hours a week; lecture and observatory amounting to one exercise a week. Junior and Senior years, both semesters. M, W, F, at 11:15. Professor Brackett.

C3. DESCRIPTIVE ASTRONOMY. (3 hours.) A study of the essential facts and principles of astronomy with lectures and readings on the history of its development as a science and discussion of theories of cosmogony and evolution. Systematic observation of certain objects with the equatorial. This course is designed for students who have a working knowledge of analytic geometry and calculus and of the more important principles in physical science; or it may be taken as an advanced course by those who have had Astronomy B1 and B2. Some preparation in free-hand and mechanical drawing also is very desirable. Junior and Senior years, first semester. T, Th, S, at 11:15. Professor Brackett.

D4. THEORETICAL AND PRACTICAL ASTRONOMY. (3 hours.) Spherical co-ordinates; least squares; determination of time, latitude and longitude with sextant and theodolite; regular observation work with equatorial and transit. Prerequisites: Astronomy B1 and B2, or C3. This course may be taken in conjunction with Astronomy B1 by students who have had sufficient preparation in mathematics and drawing. Ordinarily alternates with Astronomy D6. Class room, one hour a week; lecture and observatory amounting

to two exercises a week. Junior and Senior years. (given in 1915-1916.) Professor Brackett.

D6. ASTROPHYSICS. (3 hours.) A review of the principles of spectrum analysis, and the results obtained in physical and chemical laboratories; a study of astronomical spectroscopy, of forms of spectographs and spectroheliographs and of recent advances in the subject; observatory work with the horizontal solar telescope and spectrograph. Commonly alternates with Astronomy D4. Prerequisites: Astronomy B1 and B2. This course may be taken in conjunction with Astronomy B2 by students who have sufficient preparation in physical science. Class room, one hour a week; lecture and observatory amounting to two exercises a week. Junior and Senior years, second semester. M, 3:00; W, F, at 9:30. Laboratory hours to be arranged. Laboratory fee \$5.00. Professor Brackett.

C7 and C8. ASTRONOMICAL SEMINAR. (1 hour each) Reading and discussion of current astronomical literature and editorial assistance on the Astronomical Publications. Open to a limited number who have completed a year of work in the above courses in Astronomy. Senior year, last two semesters. Hours to be arranged. Professor Brackett.

Those who wish to select Astronomy as a major should consult the head of the department concerning the requirements.

Physics and Engineering

PHYSICS

B1. GENERAL PHYSICS. (4 hours.) Mechanics and Sound. Lectures, recitations and laboratory work. This course is designed for students desiring to take one year of work in general physics, either for its cultural value, or to meet the physics requirement of courses in medicine, biology, chemistry, or astronomy. It may be successfully pursued without any previous course in the subject. Prerequisites:

gebra, geometry and plane trigonometry. Class room, three hours a week; laboratory, one exercise a week. Freshman and Sophomore years, first semester. Class room, T, S, at 8:30; laboratory, T, at 1:00. Laboratory fee \$4.00. Professor Hitchcock.

2. HEAT, MAGNETISM, ELECTRICITY AND LIGHT. (4 hours.) Continuation of Physics B1. Class room, three hours a week; laboratory, one exercise a week. Junior year, second semester. Class room, T, Th, S, at 8:30; laboratory, T, at 1:00. Laboratory fee, \$4.00. Professor Hitchcock.

3. MECHANICS OF SOLIDS AND FLUIDS. (3 hours.) Lectures and recitations. Prerequisites: A good working knowledge of elementary mathematics, including analytic geometry and calculus, and a course in secondary school physics. Required in all engineering courses. Three hours a week. Sophomore and Junior years, first semester. T, S, at 11:15. Professor Hitchcock.

4. HEAT, WAVE MOTION AND SOUND. (3 hours.) Continuation of Physics C3. Sophomore and Junior years, second semester. T, Th, S, at 11:15. Professor Hitchcock.

5 or D5. LIGHT, STATIC ELECTRICITY AND MAGNETISM. (3 hours.) Continuation of Physics D4. If taken as a D course additional work will be required. Three hours a week. Junior and Senior years, first semester. (Not given 1915-1916.) Professor Hitchcock.

6. CURRENT ELECTRICITY. (3 hours.) Continuation of Physics C5 or D5. Junior and Senior years, second semester. (Not given in 1915-1916.) Professor Hitchcock.

Courses C3, D4, C5 and D6 are designed to meet the physics requirement of the best engineering schools. Accordingly considerable attention is given to the applications of the various subjects discussed to engineering practice.

9 and C10. PHYSICAL MEASUREMENTS. (1½ hours.) Exposition of the theory and methods of physical measurements; instruction and practice in the adjustment and use of instruments of precision in the various branches of

the subject. This course may be taken in conjunction with Physics C3, D4, C5 and D6; or may be taken entirely with C5 and D6 by those who have had the equivalent of Physics C3 and D4. Junior and Senior years, both semesters. (Given in 1915-1916.) Laboratory fee \$4.00 each semester. Professor Hitchcock.

D13 and D14. APPLIED MECHANICS. (3 hours each.) Same as Engineering D13 and D14. Junior and Senior years, both semesters. Assistant Professor Belcher.

ENGINEERING

The College does not give at present a full technical education in engineering; but for students who contemplate engineering work and wish also the foundation and culture of college training, a course of studies has been arranged. Students who have followed this course complete their preparation for a degree in the standard schools of engineering or technology in two years.

A1 and A2. GRAPHICS. (2 hours each.) A course in lettering and linear drawing, including the use and care of instruments, practice in lining and accurate construction of geometrical problems and construction of geometrical solids. Freshman year, two exercises a week, both semesters. Laboratory, Th, F, at 1:00. Assistant Professor Belcher.

In case a student offers for credit other work in Graphics instead of Engineering A1 and A2, the certificate of credit for work must be accompanied by the plates drawn and the instructor will judge whether the character and amount of work done is satisfactory. This must in every case be evidence of ability in lettering.

B3 and B4. GRAPHICS. (2 hours each.) An introductory course in orthographic and isometric projections, shading and shadows. Prerequisites: Engineering A1 and A2. Sophomore year, two exercises a week, both semesters. Laboratory, Th, F, at 1:00. Assistant Professor Belcher.

C11 and C12. SURVEYING. (3 hours each.) Class

rk; field work with compass, transit, level and sextant; setting and computation from field notes; topographical surveying and map work (Gillespie; Johnson.) Prerequisites: Mathematics B7 and B8 and Engineering A1 and A2. Sophomore year, both semesters. Alternates with Engineering C15 and C16. M, at 7:30; T, W, at 1:00. Assistant Professor Belcher.

C15. DESCRIPTIVE GEOMETRY. (3 hours.) Study and practice in the elements of projection and perspective; intersections of surfaces and solids. Alternates with Engineering C11. Prerequisites: Engineering A1 and A2. Sophomore year, first semester. (Not given in 1915-1916.) Assistant Professor Belcher.

C16. PERSPECTIVE. (3 hours.) Principles of shades and shadows, of perspective and the perspective of shadows; much practice in perspective drawing. Alternates with Engineering C12. Prerequisite: Mathematics C15. Sophomore year, second semester. (Not given in 1915-1916.) Assistant Professor Belcher.

D13 and D14. APPLIED MECHANICS. (4 hours each.) Study of the principles of mechanics of rigid bodies with many problems selected with reference to the needs of engineering students. The calculus and graphical methods are freely used. The course includes problems in statics, on reactions, stresses in frames, center of gravity, moments of inertia, and problems in kinematics and dynamics, including rectilinear and curvilinear motion, harmonic motion, momentum and angular momentum, work, power and kinetic energy. Junior and Senior years, both semesters. M, T, Th, 4:00. Assistant Professor Belcher.

CHEMISTRY

Students who wish to major in Chemistry should be prepared to meet the following requirements:

1. A knowledge of elementary Physics, equivalent to Physics B1 and B2.

2. Sufficient acquaintance with French and German to enable the student to follow with tolerable ease the literature of the subject.

3. Mathematics, including the elements of the calculus.

4. Chemistry C7, C8, C9 and C10, and six or more hours of D courses in Chemistry, the precise nature and number to be determined in individual cases.

5. In some cases a special examination covering the general field of Chemistry.

A1. THE ELEMENTS OF CHEMISTRY. (4 hours.) A introductory course covering the general field, and intended for those who have no previous knowledge of the subject. Class room, three hours a week; laboratory, one exercise a week. Freshman year, either semester. Class room, first semester, T, Th, S, at 8:30; laboratory, first semester at 7:30, or T, at 1:00. Laboratory fee, \$6.00. (Not given the second semester of 1915-1916.) Professor Lyman Assistant.

A2. INORGANIC CHEMISTRY. (3 hours.) General inorganic chemistry, devoted chiefly to the chemistry of metals. Open to those who have taken Chemistry A and who have presented Chemistry for entrance. To be accompanied by Chemistry B5. Class room, three hours a week. Freshman year, either semester. First semester, T, Th, S, at 7:30; second semester, T, Th, S, at 8:30. Assistant Professor Bartlett and Mr. Woodford.

B3. GENERAL INORGANIC CHEMISTRY. (3 hours.) Covers the chemistry of the non-metals, with a further development of the theories of chemistry. Prerequisite: Chemistry A. To be accompanied by Chemistry B6. Class room, three hours a week. Freshman and Sophomore years, either semester. (Not given the first semester of 1915-1916.) Second semester, T, Th, S, at 7:30. Assistant Professor Bartlett.

B4. INORGANIC PREPARATIONS. (2 hours.) Preparation of some simpler inorganic compounds, which illustrate matter brought out in class room in the courses listed above.

tended for those who wish for more experimental work than is found in the courses in qualitative analysis. Primarily intended to accompany Chemistry A2. Freshman year, either semester. (Not given in 1915-1916.)

B5. QUALITATIVE ANALYSIS. (2 hours.) Analysis of metals and positive ions. Laboratory periods twice a week, with occasional class room meetings. Intended to accompany Chemistry A2. Freshman year, either semester. Class room, F, at 3:00, M, at 9:30. Laboratory, two periods, selected from the following: M, at 7:30; T, at 1:00; Th, at 1:00; F, at 1:00. Laboratory fee, \$10.00. Assistant Professor Bartlett and Assistant.

B6. QUALITATIVE ANALYSIS. (2 hours.) Inorganic analysis, with special reference to non-metals and negative ions. Laboratory periods twice a week, with occasional class room meetings. Prerequisite: Chemistry B5. Intended to accompany Chemistry B3. Freshman and Sophomore years, either semester. Class room, F, at 3:00; M, at 9:30. Laboratory, two periods, selected from the following: M, at 7:30; T, at 1:00; Th, at 1:00; F, at 1:00. Laboratory fee \$10.00. (Not given the first semester of 1915-1916.) Assistant Professor Bartlett and Assistant.

C7. QUANTITATIVE ANALYSIS. (3 hours.) Theory and practice of quantitative methods, chiefly gravimetric, including problems in stoichiometry. Intended to give the student a knowledge of the fundamental methods of work. Prerequisites: Chemistry B5 and B6. Occasional lectures; laboratory, three exercises a week. Sophomore, Junior and Senior years, first semester. Lectures, M, at 9:30; laboratory, M, at 7:30; T, Th, at 1:00. Laboratory fee, \$12.00. Assistant Professor Bartlett and Assistant.

C8. QUANTITATIVE ANALYSIS. (3 hours.) Similar in purpose to Chemistry C7, except that the methods taken up are chiefly volumetric. Prerequisite: Chemistry C7. Sophomore, Junior and Senior years, second semester. Lectures,

M, at 9:30; laboratory, M, at 7:30; T, Th, at 1:00. Laboratory fee, \$12.00. Assistant Professor Bartlett and Assistant Professor Lyman.

C9 and C10. ORGANIC CHEMISTRY. (3 hours each.) The study of the more important compounds of carbon, with the preparation of about twenty organic substances. Prerequisites: Chemistry A1 and A2, or A2 and A3. Classroom, two hours a week; laboratory, one exercise a week. Sophomore, Junior and Senior years, both semesters. Classroom, M, W, at 11:15; laboratory, T, or F, at 1:00. Laboratory fee, \$6.00 per semester. First semester, Professor Lyman. Second semester, Assistant Professor Bartlett.

D11 and D12. MINERAL CHEMISTRY. (3 hours each.) The study of the sources, composition, properties and uses of minerals, accompanied by blowpipe analysis and the identification of about one hundred minerals. The study of crystallographic properties and molecular structure of inorganic and organic compounds offers to the student an excellent field of investigation. Must be preceded or accompanied by Chemistry C7 and C8. Classroom, two hours a week; laboratory, one exercise a week. Junior and Senior years, both semesters. Classroom, M, at 1:00; W, at 7:30. Laboratory, M, at 7:30. Laboratory fee, \$4.00 per semester. First semester, Professor Lyman. Second semester, Mr. Woodford.

D13. ORGANIC PREPARATIONS. (3 hours.) Intended to supplement Chemistry C9 and C10. The preparation of certain more complicated compounds of carbon, and the determination of their molecular weight, composition, etc. Prerequisites: Chemistry C9 and C10. Classroom, one hour a week; laboratory, two exercises a week. Junior and Senior years, first semester. Classroom, F, at 7:30. Laboratory, M, at 7:30; T, at 1:00. Laboratory fee, \$10.00. Professor Lyman.

C15 and C16. AGRICULTURAL CHEMISTRY. (3 hours each.) A study of soils, fertilizers, insecticides, fungicides, etc., including more especially their composition, properties, and

ation to plant growth. Prerequisites: Chemistry B5 and B6. Chemistry D11 and D12, and Geology B1 and B2 are recommended. Class room, three hours a week. Sophomore, Junior, and Senior years, both semesters. Class room, at 3:00; W, F, at 9:30. (First semester not given in 1915-1916.) Second semester, Mr. Woodford.

D17. ADVANCED QUANTITATIVE ANALYSIS. (3 hours.) A further development and continuation of Chemistry C7 and C8. Ordinarily this will take the form of agricultural analysis, including the study of the chemical and physical condition of the soil. A Hilgard elutriator is used to make a mechanical analysis of soils. Chemistry C15 and C16 must precede or accompany this course. Laboratory, three exercises a week. Junior and Senior years, first semester. Laboratory, W, Th, F, at 1:00. Laboratory fee, \$12.00. Assistant Professor Bartlett and Assistant.

D18. ADVANCED QUANTITATIVE ANALYSIS. (3 hours.) Continuation of Chemistry D17. Ordinarily this will take the form of special agricultural analysis, including the study of the composition of fertilizers, insecticides and fungicides. In this case Chemistry C15 and C16 must precede or accompany this course. Laboratory, three exercises a week. Junior and Senior years, second semester. Laboratory, W, Th, F, at 1:00. Laboratory fee, \$12.00. Assistant Professor Bartlett and Assistant.

D19 and D20. SPECIAL ADVANCED CHEMISTRY. (1 hour each.) The reading and discussion of chemical literature, the preparation of reports, etc. Prerequisites: Chemistry C7 and C8, C9 and C10, and Physics B1 and B2 or an equivalent; also a reading knowledge of a modern language. Credit is given for this work only when it is taken in connection with some other D course in this department. Class room, one hour a week. Senior year, both semesters. Class room, hours to be arranged. Professor Lyman and Assistant Professor Bartlett.

D21 and D22. PHYSICAL CHEMISTRY. (3 hours each.) survey of the whole subject is given, including the relation of mass and volume, phase relations, thermochemistry, thermodynamics, chemistry of solutions and the dissociation hypothesis, electrochemistry and optical chemistry. The laboratory work consists of the study of physico-chemical methods as related to the subject matter of the lecture. Class room, two hours a week; laboratory, one period a week. Open to Juniors and Seniors who have passed satisfactorily Chemistry C7 and C8 and Physics B1 and B2. Analytic Geometry and Calculus must precede or accompany this course. Lectures, M, at 1:00; W, at 7:30. Laboratory, W, at 1:00. Laboratory fee, \$8.00. Assistant Professor Bartlett.

A breakage deposit of \$5.00 is required of all students taking laboratory courses. At the conclusion of the work the deposit, less breakage, is returned.

GEOLOGY

B1 and B2. GEOLOGY. (3 hours each.) Consideration of problems relating to dynamical and structural Geology during the first semester. During the second semester the course will include Historical Geology and laboratory work on topographical and geological maps, lectures on local geological formation; use of plane table; rock classification. Prerequisites: Chemistry A1 and A2, Biology A1 and A2, or their equivalents. Junior and Senior years, both semesters. T, Th, S, at 9:30; laboratory hours equivalent to one period a week during second semester to be arranged with the instructor. Assistant Professor Crawford.

Biological Sciences

So important are German and Chemistry to the advanced courses in Biological Sciences that the necessity for thorough preparation in these subjects is especially emphasized for those who elect a major group in these departments.

GENERAL BIOLOGY

1. GENERAL BIOLOGY. (3 hours.) A course introducing to the study of animal life, comprising field and laboratory work on living organisms, and especially scientific methods in observing and recording facts. This course is prerequisite to further work in zoology. Class room, two hours a week; laboratory, one exercise a week. Freshman year, first semester. Class room, M, W, at 11:15; laboratory, T, or Th, at 1:00. Laboratory fee, \$5.00. Professor and Assistant.

2. GENERAL BIOLOGY. (3 hours.) A brief study of some of the fundamental biological phenomena manifested in the plant kingdom, such as evolution, adaptational development, life processes, etc. A slight acquaintance, also, will be gained with the various groups of plants and their chief characteristics. Laboratory and field work; one period a week; lecture, two hours a week. This course is intended primarily for those who desire a glimpse into the general principles of Biology. Those intending to major in botany are advised to enter directly Botany B21. Freshman year, second semester. Class room, M, W, at 11:15; laboratory, T, or Th, at 1:00. Laboratory fee, \$5.00. Assistant Professor and Professor.

ZOOLOGY

1. GENERAL ZOOLOGY. (3 hours.) Lectures and laboratory work. Types of classes and phyla of animals described and studied and careful drawings made of parts and specimens. Constant use of the microscope. The large collection of the museum used for illustrative purposes. (Parker, Howell, Brooks and other books of reference.) Class room, two hours a week; laboratory, one exercise a week. Prerequisites: Biology A1 and A2 or equivalents. Sophomore and Junior years, first semester. Class room, T, Th, at 11:15; laboratory, M, at 7:30. Laboratory fee, \$7.00. Professor and Hilton.

B12. VERTEBRATE MORPHOLOGY. (3 hours.) A treatment of the comparative anatomy and organology of vertebrates, based upon detailed work with representative types of the fishes, amphibians, reptiles, birds and man. Laboratory work with skeletons and preserved specimens. For reference, works of Kingsley, Lankester, Parker, Huxley, Beddard, Evans, Gadow, Boulenger, and others. Class room, two hours a week; laboratory, one period. Prerequisites: Physiology B3 or Zoology B11. Sophomore, Junior years, second semester. T, Th, at 11:15; laboratory, M, at 7:30. Laboratory fee, \$5.00. Professor Hilton.

B18. ENTOMOLOGY. (3 hours.) The anatomy and life history of insects studied and their life history traced. Specimens reared and their transformation studied; special orders identified by use of laboratory manuals. A collection of native and exotic insects is at the command of the student. Laboratory and field work made prominent. (Comstock, LeConte, Williston, Scudder, Cresson, and other books of reference.) Class room, two hours a week; laboratory, one exercise a week. Prerequisites: Biology B1, Physiology B3, or Zoology B11. Sophomore, Junior, Senior years, two divisions, second semester. Class room, M, W, at 11:15; laboratory, T, or Th, at 1:00. Laboratory fee, \$5.00. Professor Hilton.

C31. SYSTEMATIC INVERTEBRATE ZOOLOGY. (3 hours.) Local groups of invertebrates exclusive of insects and plants studied in the field and laboratory. The particular groups considered will be: Diplopods, chilopods, arachnids. Prerequisite: Zoology B11 or B18. Sophomore or Junior, first semester. Lecture, one hour a week, Th, at 11:15; laboratory and field work, two periods a week; laboratory, M, 7:30; or W, at 1:00. Laboratory fee, \$5.00. Professor Hilton.

C32. SYSTEMATIC VERTEBRATE ZOOLOGY. (3 hours.) Amphibia, reptiles, birds, and mammals studied in the laboratory and in the field. Prerequisite: Zoology B11.

or Junior year, second semester. Lecture, one hour a week, T, Th, at 7:30; field and laboratory work, two periods a week, M, at 7:30, or W, at 1:00. Laboratory fee, \$3.00. Professor Hilton.

3. COMPARATIVE NEUROLOGY. (3 hours.) Comparative study of some special system of organs, such as the central nervous system of vertebrates. The laboratory work consist of special dissections and the study of microscopical preparations. Prerequisites: Zoology B11 and B12, Physiology B3 and B4. Junior and Senior years, first semester. Lecture, one hour a week, F, at 1:00; laboratory, two periods a week, M, at 7:30; W, at 1:00. Laboratory fee, \$3.00. Professor Hilton.

4. CYTOLOGY AND COMPARATIVE EMBRYOLOGY. (3 hours.) Laboratory work and experimental studies with living organisms. This course may be taken only in summer when certain living eggs and larvae can be obtained. Prerequisites: Zoology B11 or Physiology B3 and B4. Sophomore and Junior years. Lecture, F, at 1:00; laboratory, W, at 1:00; M, at 7:30. Professor Hilton.

3. ADVANCED ZOOLOGY. (3 hours.) Comparative study of special groups of invertebrates or vertebrates represented in California and on the West Coast. A continuation of Zoology B11 and chiefly laboratory work. Prerequisite: Zoology B11. Junior and Senior years, first semester. Field work and laboratory. T, Th, F, at 1:00. Professor Hilton.

4. BIONOMICS. (3 hours.) An introduction to modern discussions and modern experimental and statistical evidence in variation, heredity and eugenics. A general treatment of the biological bases of plant and animal breeding, of sociology and human evolution. A course of lectures, essays and prescribed readings and constant reference to the works of DeVries, Galton, Pearson, Davenport, Castle, Huxley, Spencer, Weismann, and other recent investigators. Lectures three hours a week. Prerequisite: One year of

Zoology. Junior and Senior years, second semester. 1:00; W, F, at 7:30. Professor Hilton.

D15 or D16. ADVANCED ZOOLOGY. (3 hours.) A continuation of Zoology D13. Prerequisite: Zoology D13. Junior and Senior years, either semester. Field work and laboratory. Hours to be arranged with the instructor. Laboratory fee, \$7.00. Professor Hilton.

D19 and D20. SPECIAL ENTOMOLOGY. (3 hours.) Detailed investigations into the anatomy, life history, and economic relations of some of the groups of insects prejudicial to the interests of mankind. Designed especially for those students intending to become growers, plant economic entomologists, or doctors of medicine. Prerequisites: Biology B11 and B18. Junior and Senior years, either semester. Field work and laboratory. Hours to be arranged with the instructor. Laboratory fee, \$7.00. Professor Hilton.

PHYSIOLOGY

A1 and A2. APPLIED PHYSIOLOGY AND HYGIENE. (2 hours.) A general course in the essentials of personal hygiene, with such brief excursions into the field of physiology as are necessary to an understanding of the hygienic principles involved. Supplementing this study of the principles of the individual, there will be included a survey of the principles of public hygiene and sanitation, and a résumé of the most approved measures concerned in the aid to the injured. Required of all Freshmen, both years. F, at 11:15. Assistant Professors Stoughton, Squire, and Squire.

B11 and B12. PUBLIC HYGIENE. Advanced course consisting of a series of lectures on the principles and requirements of public sanitation, and the problems of general morbidity and mortality. Required of all Juniors. Hours to be arranged with the instructor. Assistant Professor Stoughton.

B3 and B14. PROBLEMS OF HEREDITY AND EUGENICS, AND
ADVANCED QUESTIONS OF PERSONAL AND PUBLIC HYGIENE. Ad-
vanced course. Required of all Seniors. Hours to be an-
nounced. Assistant Professors Stoughton and Squire.

B3 and B4. ANATOMY AND PHYSIOLOGY. (3 hours each.)
Human and comparative. Lectures and laboratory work.
Systems and organs studied and compared with the same in
lower vertebrates. Azoux models, preserved specimens
of organs, and skeletons are used. Careful drawings by
each student of sections, tissues and organs. (Gray, Quain,
Hewart, Howells, Mivart, Reighard, Jennings, and other
works of reference.) Class room, two hours a week; labora-
tory, one exercise a week. Sophomore year, both semesters.
Class room, W, F, at 1:00; laboratory, T, Th, at 1:00.
Laboratory fee, \$3.00. Assistant Professor Stoughton.

D5. HISTOLOGY. (3 hours.) Vertebrate. The micro-
scopic study of cells, tissues and organs of man and the
higher vertebrates. Special attention given to methods.
Those intending to study medicine after graduation will find
this course and the course in embryology very helpful. Pre-
requisite: Physiology B3 and B4. Junior and Senior years,
first semester. W, at 8:30; T, Th, at 1:00. Laboratory fee,
\$3.00. Professor Hilton.

D6. EMBRYOLOGY. (3 hours.) Comparative vertebrate
embryology. A study of the development of vertebrates up
to and including the formation of adult organs. The eggs
of amphibia, the embryos of birds and mammals, furnish
the material for the study. Prerequisite: Physiology D5.
Junior and Senior years, second semester. T, at 7:30; T,
Th, at 1:00. Laboratory fee, \$8.00. Professor Hilton.

BOTANY

B21. GENERAL BOTANY. (3 hours.) A general course
covering briefly in two semesters the entire field of botany,
with special emphasis on the morphology and phyletic re-
lationships and evolution of plants. A necessary introduc-

tory course for advanced work in Botany. Both laboratory and field work. Laboratory, one exercise a week; lecture, two hours a week. Prerequisite: Biology A2 or its equivalent. Sophomore or Junior year, first semester. W, F, 7:30; laboratory, T, at 1:00. Laboratory fee, \$3.50. Assistant Professor Crawford.

B22. GENERAL BOTANY. (3 hours.) A continuation of B21, dealing primarily with the flowering plants (Phanerogams.) Prerequisite: B21 or its equivalent. Sophomore or Junior year, second semester. W, F, at 7:30; laboratory, T, at 1:00. Laboratory fee, \$3.50. Assistant Professor Crawford.

C25. MYCOLOGY. (3 hours.) A systematic study of the great group of fungi, with special emphasis on the morphological, systematic and cytological phases. An immense herbarium of fungi is available for reference and study. Very important for those intending to study Plant Pathology. Prerequisites: B21 and B22, or their equivalent. Laboratory, two periods a week; lecture, one hour a week. Junior and Senior years, first semester. S, at 11:15; laboratory, T, Th, at 1:00. Laboratory fee, \$5.00. Assistant Professor Crawford.

D26. PLANT PATHOLOGY. (3 hours.) A study of plant diseases, their causal agents, methods of controlling them and methods of studying them in the laboratory. An important study for those intending to enter into any phase of agriculture. Laboratory, two periods a week; lecture, one hour a week. Prerequisite: Botany C25, unless by special arrangement. Junior and Senior years, second semester. S, at 11:15; laboratory, T, Th, at 1:00. Laboratory fee, \$5.00. Assistant Professor Crawford.

C23. PLANT PHYSIOLOGY. (3 hours.) A study of the behavior and life processes of plants, their nutrition, reproduction, etc. A glass house and a well-equipped laboratory are available for this work. Laboratory, two periods a week; lecture, one hour a week. Prerequisite: Botany B22.

Junior and Senior years, first semester. Lecture, Th, at 1:15; laboratory, M, at 7:30, and F, at 1:00. Laboratory fee, \$10.00. Assistant Professor Crawford.

D24. SUBTROPICAL HORTICULTURE. (2 hours.) An introductory course in the study of economic fruits and fruit products of the Pacific Slope and the subtropics. Laboratory, one period a week; lecture, one hour a week. Prerequisite: Botany B22. Junior and Senior years, first semester. Lecture, T, at 11:15; laboratory, W, at 1:00. Laboratory fee, \$3.50. Assistant Professor Crawford.

D27. ADVANCED BOTANY. (3 hours.) A detailed study of the morphology and taxonomy of some of the groups of plants. Chiefly a laboratory course and the work for the most part individual. Both laboratory and field work. Laboratory, two periods a week; conference or class room, one hour a week. Prerequisites: Botany A21 and B22. Junior or Senior year, first semester. Hours to be arranged with the instructor. Laboratory fee, \$5.00. Assistant Professor Crawford.

D28. SPECIAL BOTANY. (3 hours.) Same as Botany D27, or continuation of that course. Prerequisites: Botany A21 and B22. Hours to be arranged with the instructor. Laboratory fee, \$5.00. Assistant Professor Crawford.

D31 and D32. SPECIAL MYCOLOGY. (3 hours each.) Special and detailed investigations in fungi or plant diseases. Laboratory and field work and occasional conferences with the instructor. Work for the most part is individual. Time to be arranged with the instructor. Prerequisite: Botany C25. Junior or Senior year. Laboratory fee, \$5.00 each. Assistant Professor Crawford.

C30. PLANT PROPAGATION. (3 hours.) The elements and principles of the propagation of plants and improvement of plant varieties. Practice in the care of seeds, cuttings, bulbs and potted plants; in grafting and budding; in hybridizing and selecting of plants, etc. A glass house, lath house and

special laboratory equipment are available for this course. Designed for those who are interested in nursery work, landscape gardening, and many phases of horticulture. Classroom, one hour a week; laboratory, two periods a week. Prerequisite: C23. Junior and Senior years, second semester. Class room, Th, at 11:15; laboratory, T, F, at 1:00. Laboratory fee, \$10.00. Assistant Professor Crawford

Physical Education

A course in physiology and hygiene, described under the Department of Physiology as A1 and A2, Applied Physiology and Hygiene, is required of all Freshmen.

MEN

Physical measurements are taken twice; at beginning of first semester and at close of second; primarily to determine vital strength and organic weakness; secondarily, to determine muscular strength. Prescribed exercises for individuals below the normal; measurements plotted on anthropometrical table to determine development and comparison with the average. Required of all Freshmen, both semesters; optional for Sophomores, Juniors, and Seniors.

A medical examination is conducted by an authorized physician to determine the vitality and organic strength of the student. Required of all students.

A1 and A2. GYMNASTICS. (1 hour each.) Drill and setting-up exercises, U. S. A. Regulations without arms. Swedish System combined with apparatus, dumb bells and Indian clubs. Two class exercises a week. Two periods of games or outdoor exercise to be elected by the student in consultation with the director. Certain periods of exercise are replaced by lectures on personal hygiene. Required, Freshman year, both semesters. T, F, at 4:00. Assistant Professor Stanton and assistants.

B3 and B4. GYMNASTICS. (1 hour each.) A continuation of Gymnastics A1 and A2, with lectures on hygiene.

red, Sophomore year, both semesters. T, F, at 5:00. Assistant Professor Stanton and assistant.

and C6. SPORTS. ($\frac{1}{2}$ hour each.) Two periods of exercise in games or other exercises to be elected by the student in consultation with the director, with lecture on social hygiene. Required, Junior year, both semesters. T, F, at 5:00. Assistant Professor Stanton.

and C8. SPORTS. ($\frac{1}{2}$ hour each.) Two periods of exercise in games or walking as in C5 and C6, with lectures on hygiene as related to heredity and eugenics. Required, Senior year, both semesters. T, F, at 5:00. Assistant Professor Stanton.

WOMEN

The Department is at once educative and practical in its endeavoring not only to correct abnormalities of structure and function, but to prevent their occurrence. Physical and medical examinations are required of all entering students; the physical examination is repeated at the end of the year.

A11 and A12. GYMNASIUM PRACTICE. (1 hour each.) Two periods of gymnasium work; from Thanksgiving to May 1. Two periods of outdoor sports, elected by the student subject to the approval of the director; from October 1 to June 1. Required, Freshman year. M, Th, at 3:00, or M, Th, at 5:00. Assistant Professor Squire and Miss Roof.

B13 and B14. GYMNASIUM PRACTICE. (1 hour each.) A continuation of A11 and A12. Two periods, following the general arrangement of A11 and A12. Required, Sophomore year. M, Th, at 5:00. Assistant Professor Squire and Miss Roof.

C15 and C16. SPORTS. ($\frac{1}{2}$ hour each.) Two periods of outdoor sports elected by the student, subject to the approval of the director; from October 1 to June 1. Junior year. Assistant Professor Squire and assistant.

C17 and C18. SPORTS. ($\frac{1}{2}$ hour each.) Two periods of outdoor sports as in C15 and C16, with lectures on hygiene as related to heredity and eugenics. Senior year. Assistant Professor Squire and assistant.

B19 and B20. FOLK AND NATIONAL DANCING. ($\frac{1}{2}$ hour each.) One period; from Thanksgiving to May 1. Elective for Freshmen and Sophomores. Assistant Professor Squire.

C21 and C22. FOLK AND NATIONAL DANCING. ($\frac{1}{2}$ hour each.) One period; from Thanksgiving to May 1. Prerequisites: Physical Education B19 and B20 or their equivalent. Elective for Sophomores, Juniors and Seniors. Assistant Professor Squire.

C23 and C24. AESTHETIC DANCING. ($\frac{1}{2}$ hour each.) One period; from Thanksgiving to May 1. Prerequisites: Physical Education C21 and C22 or their equivalent. Elective for Juniors and Seniors. Assistant Professor Squire.

C25 and C26. GYMNASIUM PRACTICE. ($\frac{1}{2}$ hour each.) One period; from Thanksgiving to May 1. Prerequisites: Physical Education A11 and A12, B13 and B14 or their equivalent. Elective for Juniors and Seniors. Assistant Professor Squire and assistant.

Forty minutes constitutes a period. B19 and B20, C21 and C22, C23 and C24, C25 and C26, or Swimming may be substituted for one period of out-door exercise. Hours and credits given for these courses may not be used in the requirements for graduation.

III. History, Social Sciences and Philosophy

History and Constitutional History

HISTORY

1. ENGLISH HISTORY TO 1603. (3 hours.) An introductory course, in which emphasis is laid upon the use of sources and methods of historical work. Freshman year, two divisions, first semester. T, Th, S, at 9:30, or at 11:15. Professor White.
2. ENGLISH HISTORY SINCE 1603. (3 hours.) A continuation of History A7, with similar aims and methods. Freshman year, two divisions; second semester. T, Th, S, at 9:30, or at 11:15. Professor White.
3. A13 and A14. ANCIENT CLASSICAL HISTORY. (3 hours.) A history of more recent archeological investigation in the general field of ancient history. M, at 1:00; W, F, at 8:30. Professor Stearns.
4. 1. MEDIEVAL HISTORY. (3 hours.) From the fall of Rome to the Renaissance. Lectures on the use of sources supplemented by practice work serve to introduce the student to modern historical methods. Sophomore year, first semester. T, Th, S, at 7:30. Professor White.
5. 2. THE RENAISSANCE AND REFORMATION. (3 hours.) From the fourteenth century to the reign of Louis XIV. Special attention is paid to the lives and writings of the great leaders of that period. Sophomore year, second semester. T, Th, S, at 7:30. Professor White.
6. B21 and B22. ANCIENT ORIENTAL HISTORY. (3 hours.) The beginnings of the earliest civilization and its development in Babylonia, Assyria, Egypt, Persia and Palestine. Sophomore year, both semesters. M, at 2:00; W, F, at 8:30. Professor Stearns.

C3. EUROPE IN THE EIGHTEENTH CENTURY. (3 hours) Prerequisite: A course in English or Medieval History. This may be taken as a D course, in which case additional work will be required. Junior and Senior years, first semester. M, W, F, at 11:15. Professor White.

D4. EUROPE IN THE NINETEENTH CENTURY. (3 hours) Prerequisite: History C3 or D3. Junior and Senior years, second semester. M, W, F, at 11:15. Professor White.

D5 and D6. AMERICAN SOCIAL AND POLITICAL HISTORY. (3 hours each.) Lectures will be given on the Westward movement of the American people, the development of social and political institutions, and the history of political parties. The class makes careful studies of certain important topics. Prerequisite: A course in American History. Junior and Senior years, first and second semesters. (Not given in 1915-1916.) Professor White.

C15. MODERN ASIATIC HISTORY. (3 hours.) A study of the later life and institutions, chiefly of China and Japan, the changes under Western influences, and the various relations of Asia with America and Europe. If taken as a D course, additional work is required. Prerequisite: A course in English, Medieval or American History. Junior and Senior years, first semester. M, at 9:30; W, F, at 3:00. Professor White.

D16. HISTORY OF SPANISH AMERICA. (3 hours.) Through lectures and collateral reading, a study is made of the social and political institutions, the economic development and the relations with Europe and America of the principal Spanish-American countries. Prerequisite: A course in English, Medieval or American History. Junior and Senior years, second semester. M, at 9:30; W, F, at 3:00. Professor White.

For courses in Hebrew History, Early Christian History, History of Religion and History of Christianity, see under the Department of Biblical Literature.

CONSTITUTIONAL HISTORY

and D10. COMPARATIVE CONSTITUTIONAL HISTORY. (3 hours each.) With the English Constitution as a basis, comparison of the constitutions of European and American countries is made. This gives a fair knowledge of present-day governments. Junior and Senior years, both semesters. Given in 1915-1916.) Professor Neely.

D11 and D12. AMERICAN CONSTITUTIONAL HISTORY. (3 hours each.) In this course the principles of constitutional law are taught, constitutional questions discussed and constitutional cases examined. Prerequisite: A course in American History. Junior and Senior years, both semesters. T, S, at 8:30. Professor Neely.

LAW

D1 and B2. ELEMENTARY LAW. (3 hours each.) This course treats of the sources of law, common law, equity. A text book is used, also reported cases, combining the "text book method" with the "case system" of teaching law. Junior and Senior years, both semesters. M, at 1:00; W, F, at 8:00. Professor Neely.

B3 and C4. ELEMENTARY LAW AND CONTRACTS, PLEADING AND EVIDENCE. (3 hours each.) This course treats of the principles of common law, contracts, chancery, and code pleading by text books and from reported cases. Students are required to prepare written pleadings for examination, criticism and marking. Junior and Senior years, both semesters. T, Th, S, at 9:30. Professor Neely.

D17. AMERICAN DIPLOMACY. (3 hours.) A study is made in this course of the history of the foreign relations of the American Colonies under the Continental Congress, and an examination of the important treaties of the United States. Establishment, organization and history of the Department of State. Junior and Senior years, first semester. T, at 8:30; W, F, at 2:00. Professor Neely.

D18. INTERNATIONAL LAW. (3 hours.) In this course study is made of the principles and rules of law that have been adopted for the conduct of international affairs by consenting nations. Junior and Senior years, second semester. M, at 8:30; W, F, at 2:00. Professor Neely.

ECONOMICS AND SOCIOLOGY

B1 and B2. INTRODUCTION TO ECONOMICS. (3 hours each.) An elementary course which covers the entire field. Conducted for those desiring a general knowledge of the subject, it lays the foundation for specialization in the department. Sophomore and Junior years, both semesters. M, 1:00; W, F, at 7:30, or M, W, F, at 11:15. Professor Sumner and Mr. Brandt.

B3. PRINCIPLES OF ECONOMICS. (3 hours.) A rapid survey of the field covered in Economics B1 and B2, intended to meet the needs of mature students, particularly those specializing in other fields. Junior and Senior years, first semester. T, Th, S, at 11:15. Professor Sumner and Brandt.

C5. MONEY AND BANKING. (3 hours.) The history and theory of money and banking, especially in their bearing on the practical problems of today. Prerequisite: Economics B1 and B2 or B3. Junior and Senior years, first semester. M, at 2:00; W, F, at 8:30. Professor Sumner and Brandt.

C6. PUBLIC FINANCE. (3 hours.) A study of taxation and other methods of meeting governmental expenditures in the light of both theory and practice. The budget, local and national taxation, and public debts are among the subjects taken up. Prerequisite: Economics C5. Junior and Senior years, second semester. M, at 2:00; W, F, at 8:30. Professor Sumner and Mr. Brandt.

D7. CORPORATION ECONOMICS. (3 hours.) A study of the growth of modern methods of large scale production and distribution. The benefits and dangers of monopolies and

trusts. Pools, trusts, and other forms of combination considered, together with plans for their regulation. Junior and Senior years, first semester. M, at 3:00, W, F, at 9:30. Professor Sumner.

PROBLEMS OF LABOR. (3 hours.) The factory system, modern organization of labor, woman and child labor, labor legislation, workingmen's insurance, and other appropriate problems. Prerequisite: Economics B1 or B3. Junior and Senior years, second semester. (Not given in 1915-16.) Professor Sumner.

10. TRANSPORTATION. (3 hours.) A study of the principal problems involved in securing and regulating the land and water transportation of the United States. Normally follows Economics D7. Junior and Senior years, second semester. M, at 3:00; W, F, at 9:30. Professor Sumner.

19 and D20. APPLIED SOCIOLOGY. (1 hour each.) The work consists of first-hand study of local industrial and social problems, together with the reading and discussion of the latest literature treating of these subjects. Senior and Junior years, both semesters. Hour to be arranged. Professor Sumner and Mr. Brandt.

B21 and B22. ELEMENTS OF SOCIOLOGY. (3 hours each.) The development of society, its functions, institutions and customs. Illustrations are drawn from primitive society as well as from the America of today. Sophomore and Junior years, both semesters. T, Th, S, at 9:30. Professor Sumner and Mr. Brandt.

C25. POOR RELIEF. (3 hours.) An examination of the causes of pauperism and their remedy, the obligation of society and the methods of relief. Prerequisites: Sociology B1 and B22, or Economics B1 and B2 or B3. Junior and Senior years, first semester. T, Th, S, at 7:30. Professor Sumner.

C26. CRIMINOLOGY. (3 hours.) A study of crime from the social point of view, including its cause and the treatment of the criminal. Normally follows Economics C25.

Junior and Senior years, second semester. T, Th, S, at Professor Neely.

D27. THEORIES OF SOCIAL REFORM. (3 hours.) Plato's Republic to Modern Socialism. The principal schemes, Utopian and scientific, for the radical change of social organizations. Prerequisites: Economics B21 B22 and B1 and B2 or B3. Junior and Senior years, second semester. T, Th, S, at 8:30. Professor Sumner.

C28. CITY PROBLEMS. (3 hours.) The chief social and economic problems incident to modern city life. In addition to the general class work, each student is required to solve some problem for special investigation. Prerequisites: Economics B1 or B3 or B21. Junior and Senior years, second semester. T, Th, S, at 11:15. Professor Sumner.

D30. IMMIGRATION. (3 hours.) A study of the causes and effects of immigration. Special emphasis is given to the present-day American issues. Junior and Senior years, second semester. T, Th, S, at 8:30. Professor Sumner.

Philosophy

PSYCHOLOGY AND EDUCATION

B1. ELEMENTS OF PSYCHOLOGY. (3 hours.) Intended to give the student a general view of the field of psychology, its aims, methods, values, relations, and its application to practical conduct. Class and individual experiments illustrate and supplement the text. Text-book, lectures, recitations and laboratory work. Required in all courses. Sophomore and Junior years, two divisions, first semester. M, at 2:00; W, F, at 8:30; or M, at 3:00; W, F, at 9:30. Assistant Professor Hughes.

B2. PSYCHOLOGY. (3 hours.) Same as Psychology B1. Second semester. M, at 3:00; W, F, at 9:30. Assistant Professor Hughes.

B3 and C4. PRINCIPLES OF PSYCHOLOGY. (3 hours each.) This course is intended for those students who desire a more extended study of psychology along the lines of B1 or B2.

more emphasis is laid upon the comparative study of different systems, upon individual experiment and class demonstration. Text-book, lectures, recitations, and laboratory work. Those who take this course fulfill the three-hour requirement in Psychology and get three hours in addition. Sophomore and Junior years, both semesters. T, Th, S, at 9:30. Assistant Professor Hughes.

C6. ADVANCED PSYCHOLOGY. (3 hours.) Designed to give the student a more intimate knowledge of the more important problems of modern psychology in its varying branches. Some of the problems discussed are those in genetic psychology, abnormal psychology, animal psychology, psychotherapy and educational psychology. Lectures, outside readings, reviews and theses. Intended for those planning to enter the professions of teaching, medicine, law and the ministry. Prerequisite: Psychology B1 and B2. Junior and Senior years, second semester. M, at 2:00; W, F, at 9:30. Assistant Professor Hughes.

C7. EDUCATIONAL PSYCHOLOGY. (3 hours.) A course in the practical application of psychology to the educative process, the theories of the functions of education and the laws which govern the educative procedure. The topics are treated in the light of modern psychological and physiological investigations, and the course is intended for those going into the professions of teaching, medicine, law and the ministry. Bagley's *Educative Process*, lectures and assigned readings. Prerequisite: Philosophy B1. Junior and Senior years, first semester. T, Th, S, at 9:30. Assistant Professor Hughes.

D8. HISTORY OF EDUCATION. (3 hours.) A continuation of Psychology C7. An historical and critical treatment of the methods and ideals of the Greek, Roman and modern educational systems. Text-book and assigned readings. Junior and Senior years, second semester. T, Th, S, at 9:30. Assistant Professor Hughes.

PHILOSOPHY

B21. LOGIC. (3 hours.) The course is designed to be an introduction to the essentials of reasoning. Stress is laid upon exercises in logical construction, the detection of fallacies, and upon conception and classification. Inductive and deductive in their relations, as employed in scientific research. Text, recitations, lectures and written assignments. Sophomore and Junior years, first semester. M, at 2:00; W, F, at 8:30. Professor Parker.

B23. THE ELEMENTS OF ETHICS. (3 hours.) The origin and development of moral ideas. The relation of these ideas and of their development to civilization, with especial reference to their bearing upon the relation of the individual to society. The problems considered are those of goodness, evil, duty, freedom, conscience, the nature of the self, and the supreme good. Lectures, required readings and these. Prerequisite: Psychology B1 or B2. Required of all not taking Philosophy C32. Junior year, first semester. T, Th, S, at 8:30. Professor Parker.

B24. THE ELEMENTS OF ETHICS. (3 hours.) Same as Philosophy B23. Sophomore and Junior years, second semester. M, at 3:00; W, F, at 9:30. Professor Parker.

C25. ANCIENT AND MEDIEVAL PHILOSOPHY. (3 hours.) Lectures, readings of fragments of early Greek philosophers and selected readings from the writings of Plato and Aristotle. An extended thesis treating of some fundamental problem of ancient philosophy. Text, Rogers' "A Student's History of Philosophy." Junior and Senior years, first semester. T, Th, S, at 11:15. Professor Parker.

C26. MODERN PHILOSOPHY. (3 hours.) Lectures, and readings from Descartes, Leibniz, Locke, Hume, and Kant. A thesis dealing with some modern philosophical problem is required. Rogers' text. Rand's "Classical Philosophers." Reference is made to Royce's "The Spirit of Modern Philosophy," and to Calkin's "The Persistent Problems of Philosophy." Junior and Senior years, second semester. T, Th, S, at 11:15. Professor Parker.

C32. THE PRINCIPLES OF ETHICS. (3 hours.) A course designed for more advanced students of philosophy. May be substituted for Philosophy B23 by those students who make Philosophy their major, and likewise by other students with approved preparation. May also be taken as an elective by students who have completed B23 with A grade. Lectures and theses. Junior and Senior years, second semester. T, Th, S, at 8:30. Professor Parker.

In keeping with the requirements of those who plan to become graduate students of Philosophy, certain courses are offered, one each semester, in which the spirit of independent research is encouraged, and methods of specialized study are within certain limits employed. Except by consent of the department, registration in these courses is limited to students whose major is Philosophy. Prerequisites: Nine hours of Philosophy and Psychology, including C25 and C26.

D27. INTRODUCTION TO PHILOSOPHY. (3 hours.) The course is designed to familiarize the student with the outlines, divisions and methods of procedure in the several branches of philosophical inquiry. Junior and Senior years, first semester. T, Th, S, 7:30. Professor Parker.

D28. METAPHYSICS. (3 hours.) An inquiry for the fundamental conceptions of philosophy. Junior and Senior years, second semester. T, Th, S, 7:30. Professor Parker.

D29. PHILOSOPHY OF RELIGION. (3 hours.) The origin and nature of religion. Its development as a corollary of civilization through stages approaching to the level of revelation and redemption. These stages considered with especial reference to their illustration by the religion of Israel and its culmination in Christianity. Junior and Senior years, first semester. (Not given in 1915-1916.) Professor Parker.

D30. MODERN PHILOSOPHICAL PROBLEMS. (3 hours.) An effort to state the prominent tendencies in present-day thinking, and to relate them to their proper historical sources. Junior and Senior years, second semester. (Not given in 1915-1916.) Professor Parker.

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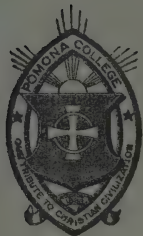
Pomona College

ANNUAL CATALOG

1916—1917

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Twenty-ninth Year

Pomona College

ANNUAL CATALOG

Register of officers and
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mission, description of courses
and general information : :

November, 1916

CLAREMONT, CALIFORNIA

Published by the College

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MAY

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JUNE

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AUGUST

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SEPTEMBER

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23	24	25	26	27	28	29
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COLLEGE CALENDAR

1916

<i>September 25 Monday</i>	Registration Days. Monday
<i>September 26 Tuesday</i>	Tuesday, examinations for
<i>September 27 Wednesday</i>	trance
<i>September 27 Wednesday</i>	Academic year begins, 10:30 a. m.
<i>October 14 Saturday</i>	Founders Day
<i>Date to be chosen</i>	Mountain Day
<i>November 29 Wednesday</i>	Thanksgiving Recess begins, 10
	a. m.
<i>December 4 Monday</i>	Thanksgiving Recess ends, 10
	a. m.
<i>December 22 Friday</i>	Christmas Recess begins, 10:30 a.

1917

<i>January 2 Tuesday</i>	Christmas Recess ends, 10:30 a.
<i>January 6 Saturday</i>	Last day for choice of studies for
	the following semester
<i>January 29 Monday</i>	Kinney Freshman Contest in D
	clamation, 8 p. m.
<i>January 31 Wednesday</i>	} Mid-year Examinations
<i>to</i>	
<i>February 10 Saturday</i>	} Registration Days for Second S
<i>February 12 Monday</i>	
<i>February 13 Tuesday</i>	mester. Examinations for entran
<i>February 13 Tuesday</i>	First Chapel
<i>February 22 Thursday</i>	Washington's Birthday
<i>February 23 Friday</i>	Matriculation Day
<i>Date to be chosen</i>	Senior Mountain Day
<i>April 3 Tuesday</i>	Spring Recess begins, 10:30 a. m.
<i>April 12 Thursday</i>	Spring Recess ends, 10:30 a. m.
<i>Date to be chosen</i>	Mountain Day
<i>May 30 Wednesday</i>	Memorial Day
<i>June 2 Saturday</i>	Last day for choice of studies for
	the following semester
<i>June 11 Monday</i>	} Final examinations
<i>to</i>	
<i>June 21 Thursday</i>	} Commencement Exercises
<i>June 22 Friday</i>	
<i>to</i>	
<i>June 25 Monday</i>	} Academic year begins, 10:30 a. m.
<i>September 26 Wednesday</i>	

Historical Sketch

The history of the development of Southern California from a sparsely inhabited and thought fit only for a cattle range to a genuine American commonwealth, with its multitude of prosperous communities, covers less than forty years, but those years of intense activity and remarkable growth.

The completion of a second transcontinental railway in 1887, together with the realization of the great agricultural possibilities of the section through irrigation, induced at that time a rapid migration and a great inflation of land values. On every new town sprang up almost in a day and all the scenes of a pioneer frontier life were being enacted.

While the dominant interests were naturally commercial and speculative, there were many among the new settlers whose chief concern was for the higher values of life and character. At least among these were those whose former affiliations had been with New England and its institutions. The Southern California District Association of Congregational Churches, meeting in San Bernardino in 1882, agitated the question of the founding of a college of the New England type. In 1886 the Association met at Lugonia (now Redlands), when the report of the educational committee was an earnest appeal for such a college. At this meeting a larger educational committee than usual was appointed and was instructed to view locations and invite proposals of aid toward establishing a "Christian college of the New England type." In accordance with these instructions the committee visited various places from which they had received offers of aid.

In May, 1887, the District Association met in Los Angeles and became the General Association of Southern California. This General Association immediately gave full power to its committee of education, not only to select the college site, but to appoint trustees for the institution which was to be. Fifteen trustees, three of whom are still members of the board, were appointed and the college was incorporated October 14,

1887, under the name of The Pomona College. The site selected was about four miles north of the City of Pomona.

For the immediate needs of the College a small private house was rented in Pomona, and in it the work of instruction was begun in September, 1888. In the following January an unfinished hotel in Claremont (now Sumner Hall), together with considerable land adjacent, was given to the College and the work was transferred to that place. Later the site originally selected was given up and Claremont was made the permanent seat of the College.

The first class was graduated in 1894, at which time the total number of college students was forty-seven. In 1916 the graduating class numbered seventy-nine and the present enrollment is five hundred and ninety-seven, notwithstanding the fact that the rapid growth of the College has compelled the limitation of the freshman class to two hundred, one hundred men and one hundred women.

The original campus of about twelve acres has been enlarged by purchase and by gifts, until it now comprises over one hundred acres. A plan for the development of the campus and its buildings has been carefully worked out by competent landscape gardeners and architects, and all growth is in accordance with this harmonious plan.

The Board of Trustees is a self-perpetuating body, free from all ecclesiastical control, but pledged by the College charter to maintain an institution thoroughly Christian and thoroughly unsectarian.

From the first it has been the policy of trustees and faculty to maintain a high standard of college life and work, and to place the emphasis upon quality in the development of strong and serviceable Christian manhood and womanhood. Thus the purpose for which the College was founded is expressed in its motto, Our Tribute to Christian Civilization.

Amended Articles of Incorporation

WHEREAS, at a meeting of "The Pomona College," a corporation, duly called and held on the 21st day of February, 1907, a majority of said members being present, it was unanimously decided to amend the Articles of Incorporation of said corporation by changing the name of said corporation from "The Pomona College" to "Pomona College," and by making various amendments, as hereafter set forth, and

WHEREAS, after due and legal notice given, as required by the Superior Court of Los Angeles County did, on the 28th day of June, 1909, upon the petition of a majority of the members of said corporation, make an order authorizing the change of the name of said corporation from "The Pomona College" to "Pomona College," and

WHEREAS, there has been filed with the Secretary of said corporation, the written assent of more than a majority of the members of said corporation to making and filing of the amended articles of incorporation, as hereinafter set forth; now, therefore,

KNOW ALL MEN BY THESE PRESENTS:

That we, the undersigned, have this day voluntarily associated ourselves together for the purpose of forming a corporation under the laws of the State of California, and we hereby certify:

I.

That the name of said corporation shall be "Pomona College."

II.

That the purposes for which it is formed are:

a) To establish, maintain and conduct a College and Academy of Learning, with all the powers and privileges conferred by law upon such corporation.

(b) That said College and Academy shall be distinctively Christian, in harmony with Evangelical Churches, but not sectarian, and shall be open to students of both sexes.

(c) To buy and sell, hold, rent, lease and otherwise handle or dispose of, as may be necessary for the conduct of said corporation, all kinds of real and personal property.

(d) To receive, manage and hold gifts and bequests for the use and benefit of said institution, or any work conducted by said institution or for the benefit of any person or persons concerned with said institution.

III.

The location of said College shall be at Claremont, County of Los Angeles, State of California, which shall be the location of the principal office of said corporation. The location of said Academy shall be at such place within the State of California as may be designated by the Board of Trustees of said corporation.

IV.

That the number of Trustees shall be twenty-five. The names and residences of those chosen to act as Trustees, and who are now acting as Trustees of said corporation, are as follows:

(Here follow the names and residences of the Trustees.)

V.

There has been subscribed the following property to assist in founding the College and Seminary:

(Here follows the description of the property.)

BOARD OF TRUSTEES

GEORGE W. MARSTON, *President*, San Diego
 REV. JOSEPH H. JOHNSON, D.D., *Vice-President*, Los Angeles
 CHARLES B. SUMNER, LL.D., *Secretary*, Claremont
 CHARLES E. WALKER, *Treasurer*, Los Angeles
 EDWARD F. GOFF, *Auditor*, Claremont

Term of Office Expires, June, 1917

RAYMOND C. BROOKS, D.D., Berkeley
 VIN F. HAHN, Pasadena
 PHEN H. HERRICK, Riverside
 WILEY W. MUDD, Los Angeles
 WILLIAM O. WARK, Pomona

Term of Office Expires, June, 1918

WELLYN BIXBY, Long Beach
 WILLIAM HORACE DAY, D.D., Los Angeles
 THUR M. DOLE, Pomona
 HENRY KINGMAN, D.D., Claremont
 WILLIAM S. MASON, Evanston, Ill.

Term of Office Expires, June, 1919

VES A. BLAISDELL, D.D., Claremont
 CHARLES E. HARWOOD, Upland
 CHARLES B. SUMNER, LL.D., Claremont
 H. R. WELDON, South Pasadena
 ED M. WILCOX, Lamanda Park

Term of Office Expires, June, 1920

THAN W. BLANCHARD, Santa Paula
 P. CLARK, Los Angeles
 FRED E. GARRISON, PH.D., Claremont
 WILLIAM F. HOLT, Los Angeles
 GEORGE W. MARSTON, San Diego

Term of Office Expires, June, 1921

FRANK M. DOWLING, Fullerton
 REV. JOSEPH H. JOHNSON, D.D., Los Angeles
 FREDERICK W. LYMAN, Pasadena
 TYLER A. WOODFORD, Claremont
 FRANCIS C. YEOMANS, Long Beach

ERNEST E. JONES, *Business Manager*, Claremont

Committees of the Board

Executive Committee

JAMES A. BLAISDELL, *Chairman*
CHARLES B. SUMNER, *Secretary*
ARTHUR M. DOLE
EDWIN F. HAHN
CHARLES E. HARWOOD
CHARLES E. WALKER
BUTLER A. WOODFORD

Committee on Investments

CHARLES E. WALKER
ELI P. CLARK
GEORGE W. MARSTON
FRED M. WILCOX
ERNEST E. JONES, *Business Manager*

Committee on Ways and Means

GEORGE W. MARSTON
JOSEPH H. JOHNSON
JAMES A. BLAISDELL
WILLIAM F. HOLT
ELI P. CLARK
STEPHEN H. HERRICK
HENRY KINGMAN
WILLIAM S. MASON
SEELEY W. MUDD

Committee on Education

JAMES A. BLAISDELL
LLEWELLYN BIXBY
WILLIAM H. DAY
FRANK M. DOWLING
EDWIN F. HAHN

Committee on Buildings and Grounds¹

CHARLES B. SUMNER
GEORGE W. MARSTON

Committee on Nominations

JAMES A. BLAISDELL
LLEWELLYN BIXBY
CHARLES B. SUMNER

¹In conjunction with a committee of the Faculty

FACULTY

ES ARNOLD BLAISDELL

345 College Ave.

President, 1910¹

B.A., Beloit College; M.A., Beloit College; D.D., Beloit College. Graduate, Hartford Theological Seminary.

US GRANDISON BALDWIN

Palo Alto

B.A., Oberlin College. Student, Andover Theological Seminary. D.D., Oberlin College.

President Emeritus, 1890

IN CLARENCE NORTON

137 W. Seventh St.

Member of the Faculty and Professor of the Greek Language and Literature on the Edwin Clarence Norton Foundation, 1888

B.A., Amherst College; M.A., Amherst College and Yale University; Ph.D., Carleton College; D.D., Pacific Theological Seminary. Graduate Student, Johns Hopkins, Columbia and Oxford Universities.

NK PARKHURST BRACKETT²

270 E. Third St.

Professor of Mathematics on the Frank Parkhurst Brackett Foundation and Director of the Observatory, 1888

B.A., Dartmouth College; M.A., Dartmouth College. Honorary Fellow, Clark University.

BE ESTELLE SPALDING

261 W. Fifth St.

Professor of English Literature on the Phebe Estelle Spalding Foundation, 1889

B.L., Carleton College; M.L., Carleton College; Ph.D., Boston University.

NIEL HERBERT COLCORD

157 E. Seventh St.

Professor of the Latin Language and Literature, 1890

B.A., Amherst College; M.A., Amherst College; B.D., Andover Theological Seminary. Graduate Student, Harvard University.

HUR DART BISSELL

319 Harvard Ave.

Professor of German, 1892

B.A., Amherst College; M.A., Amherst College; B.D., Yale University. Graduate Student, Yale University and University of Leipzig.

¹The date in each case denotes the beginning of original term service.²Absent on leave first semester, 1916-1917.

GEORGE GALE HITCHCOCK

721 College

*Professor of Physics, 1892*B.A., University of Nebraska. Graduate Student,
Hopkins and Cornell Universities.ALBERT JOHN COOK¹*Emeritus Professor of Biology, 1894*B.S., Michigan Agricultural College; M.S., Michigan
cultural College; D.Sc., Michigan Agricultural College. C
uate Student, Harvard and Cornell Universities.

GEORGE STEDMAN SUMNER

105 College

*Professor of Economics and Sociology on the Stedman
Sumner Foundation, 1897*B.A., Pomona College; B.A., Yale University; Ph.D.,
University.

CHARLES CUMMINGS STEARNS

146 E. Tent

*Professor of Biblical History and Literature on the Nanc
Lyon Foundation, 1906*B.A., Yale University; M.A., Yale University; B.D., U
Theological Seminary. Graduate Student, University of B

GRACE ELLA BERRY

Sumner

Dean of Women and Assistant Professor of Mathematics

B.S., Mount Holyoke College; M.A., Mount Holyoke Co

JAMES ALEXANDER LYMAN

833 Indian Hill

*Professor of Chemistry, 1909*B.A., Beloit College; M.A., Beloit College; Ph.D., J
Hopkins University. Graduate Student, University of Chi

MILTON ERASTUS CHURCHILL

507 Yale

*Secretary of the Faculty and Associate Professor of Ge
1902*B.A., Knox College; M.A., Knox College; Litt.D.,
College; B.D., Yale University. Graduate Student, Univ
of Leipzig.

MENDAL GARBUTT FRAMPTON

927 Harvard

*Professor of the English Language, 1904*B.A., Illinois College; M.A., Illinois College; M.A., Ha
University. Graduate Student; Harvard and Chicago Un
sities.¹Died, September 29, 1916.

CHARLES GRACCHUS NEELY 1122 College Ave.
Professor of Constitutional History and Law, 1911
 B.L., University of Illinois.

LIAM ATWOOD HILTON 1264 Dartmouth Ave.
Professor of Zoology on the Willard George Halstead
Foundation, 1905
 B.S., Cornell University; Ph.D., Cornell University.

D ALBERT BACON 736 College Ave.
Professor of Applied Music and Instructor in Singing, 1902
 Student in Ohio Wesleyan University, Oberlin Conservatory
 of Music, Chicago Conservatory of Music and Chicago Musical
 College.

LLIS ALLEN PARKER 545 Indian Hill Blvd.
Professor of Philosophy, 1912
 B.A., Kansas State Normal School; M.A., Harvard Uni-
 versity; Ph.D., Harvard University.

NARD CAPEN EWER 339 Yale Ave.
Professor of Psychology, 1916
 B.A., Brown University; M.A., Brown University; Ph.D.,
 Harvard University.

LIAM POLK RUSSELL 506 E. Sixth St.
Associate Professor of Mathematics on the Joseph W. Fiske
Foundation, 1904
 B.A., Cumberland University; M.A., Cumberland Univer-
 sity. Graduate Student, Columbia and Yale Universities.

RO BEATH JONES 306 College Ave.
Associate Professor of Romance Languages, 1911
 B.A., Boston University. Graduate Student, Universities
 of Geneva and Barcelona. Student, Estudis Universitaris
 Catalans.

THUR VOLNEY STOUGHTON 146 W. Seventh St.
Associate Professor of Physiology and Hygiene, and College
Physician, 1911
 B.A., Pomona College; M.D., Ohio Medical University.
 Graduate Student, Medical Department of Johns Hopkins Uni-
 versity and Medical School of Harvard University. Student,
 Laboratories of Friedrichshain Krankenhaus and private labor-
 atory of Professor Pick, Berlin. Resident physician, Protestant
 Hospital, Columbus, O.

ELLA WHITE BROWN

301 Smiley

*Resident in Smiley Hall and Assistant Professor of English,*B.S., Central Normal College; M.A., Campbell College;
LL.B., Kansas University. Graduate Student, Columbia University.

HANNAH TEMPEST JENKINS

Claremont

Assistant Professor of Art and Design, 1905

Graduate Teachers College, Columbia University. Student, Philadelphia Academy of Fine Arts. Pupil of Jean Paul Laurens, Constant and St. Pierre in figure and portrait, of Herbert Thompson in landscape, and of Wm. M. Chase, Robert Von der Stege and Cecilia Beaux in portrait. Paris Salonist, 1889.

ROBERT TRESILIAN BELCHER

169 W. Sixth

Assistant Professor of Mathematics and Engineering, 1901

B.A., Queen's University. Graduate Student, Queen's University and University of California.

WALTER ALFRED ALLEN¹*Assistant Professor of Musical Theory and Appreciation,
Instructor in Organ, 1912*

B.A., Beloit College. Graduate Student, Yale University.

LAURA CHARLTON SQUIRE

248 W. Seventh

Assistant Professor of Physical Education for Women, 1901

B.A., Pomona College. Graduate Student, University of California and Wellesley College.

ROBERT MARTIN STAPLES

First St. and Yale

Assistant Professor of Violin, 1907

Pupil of Joachim and Dancla.

EDWARD PAYSON BARTLETT

Claremont

*Assistant Professor of Chemistry and Acting Dean of
College, 1909*

B.A., Dartmouth College; M.A., Harvard University; Ph.D., Harvard University.

WILLIAM SHEFFIELD AMENT¹*Assistant Professor of English, 1912*

B.A., Oberlin College; M.A., Harvard University.

¹Absent on leave, 1916-1917.

CTOR EDWARD MARRIOTT 116 Twelfth St.
Librarian, 1912

B.A., Beloit College; M.A., University of California. Graduate Student, Yale University.

VING OTIS PECKER Claremont Inn
Assistant Professor of Romance Languages, 1912
 B.A., Boston University. Graduate Student, Boston University.

WILLIAM HOLLAND MATLOCK 246 Dartmouth Ave.
Assistant Professor of German, 1913
 Ph.B., Drake University. Graduate Student, Goettingen, Heidelberg and Munich, the Sorbonne and College of France.

DAVID LIVINGSTONE CRAWFORD 234 W. Sixth St.
Assistant Professor of Botany on the Henry Kirke White Bent Foundation, 1914
 B.A., Pomona College; M.A., Leland Stanford University. Graduate Student, Cornell University.

OMER ELMER ROBBINS Harrison and Berkeley Avenues
Assistant Professor of Ancient Languages, 1915
 B.A., University of Michigan; M.A., University of Michigan; Ph.D., University of Michigan. Graduate student and holder of University and Buhl Classical Fellowships, University of Michigan.

WALTER EARLE HARTLEY 143 E. Tenth St.
Assistant Professor of Organ and Piano, 1915
 B.A., and B. Mus., Yale University. Associate, American Guild of Organists. Pupil of Widor in Organ and Composition, and Stubbs.

WALDEMAR CHRISTIAN WESTERGAARD Smiley Hall
Assistant Professor of History, 1916
 B.A., University of North Dakota; M.L., University of California; Ph.D., University of California. Fellow in History, Cornell University.

EARL PETER SCHOTT 146 E. Seventh St.
Assistant Professor of Physical Education for Men, 1916
 B.E., Nebraska State Normal School; B.P.E., Young Men's Christian Association College, Springfield, Massachusetts. Graduate Student, Purdue University.

EUGENE WHITE NIXON 219 W. Sixth St.
Assistant Professor of Physical Training for Men, 1916
 B.A., Monmouth College. Graduate Student, University of Illinois.

REGINALD POLE

Los Angeles

Director of Dramatics, 1916

B.A., Cambridge University.

MABLE CLAIR WEST

1016 Columbia Ave

Instructor in Piano, 1905

B.S., Pomona College. Graduate Student, Peabody Conservatory of Music, Baltimore.

HARRIET PASMORE

157 W. Seventh St

Instructor in Piano and Singing, 1914

B.A., University of California. Graduate Student, University of California.

FREDERICK NEWTON EDWARDS

121 Smiley Hall

Instructor in Forensics and English, 1915

B.A., Pomona College; M.A., University of California.

ALFRED OSWALD WOODFORD

639 Yale Ave

Instructor in Chemistry, 1915

B.A., Pomona College. Graduate Student, University of California.

FRANCIS CHARLES FLINT

119 College Ave

Instructor in Chemistry, 1915

B.S., Pomona College. Fellow in Chemistry, Pomona College.

JOHN STARK EVANS

339 Yale Ave

Instructor in Theory of Music and Piano, 1916

B.A., Grinnell College. Pupil of Ganz and Rubin Goldmark.

JULIET DIXON

345 College Ave

Instructor in Physical Training for Women and Alumnae Resident, 1916

B.A., Pomona College.

ARTHUR JOHN MERTZKE

Claremont Institute

Instructor in Economics and Sociology, 1916

B.A., University of Wisconsin.

KENNETH PERKINS

709 College Ave

Instructor in English and Dramatics, 1916

B.L., University of California; M.A., University of California.

Lecturers—1915-1916

- REV. ALBERT PARKER FITCH, D.D. Cambridge, Mass.
(On the Joseph H. Johnson Foundation)
President of Andover Theological Seminary
Theme: Religion and the Undergraduate
- REV. WILLIAM ORR WARK, B.A. Pomona
Theme: Biblical Literature
- REV. WILLIAM ZUMBRO, M.A. Madura, India
President of American College
Theme: Comparative Religion
- JOHN BATES CLARK, PH.D., LL.D. New York City
(On the Joseph H. Johnson Foundation)
Professor of Political Economy, Columbia University
Theme: The Dynamics of Wages

Lecturers—1916-1917

- REV. ALBERT WENTWORTH PALMER, B.A., B.D. Oakland
Theme: Social Applications of Christianity
- REV. WILLIAM ORR WARK, B.A. Pomona
Theme: Biblical Literature
- FRANCIS HARDING WHITE, PH.D. Eighth St. and College Ave.
Theme: Asiatic and South American History
- GEORGE BURTON ADAMS, PH.D., LITT.D. New Haven, Conn.
(On the Joseph H. Johnson Foundation)
Professor of History, Yale University
Theme: Foundations of American Constitutional History
- REV. JOHN KINGSLEY BIRGE Smyrna, Turkey
(On the Henry D. Porter Foundation)
Theme: Mohammedanism

Administrative Officers of the Faculty

JAMES ARNOLD BLAISDELL, D.D.	President's Rooms, Librarian
<i>President</i>	
EDWIN CLARENCE NORTON, PH.D.	Room 3, Holmes Hall
<i>Dean of the Faculty</i>	
EDWARD PAYSON BARTLETT, PH.D.	Room 8, Holmes Hall
<i>Acting Dean of the College</i>	
GRACE ELLA BERRY, M.A.	Sumner Hall
<i>Dean of Women</i>	
MILTON ERASTUS CHURCHILL, LITT.D.	Secretary's Office, Librarian
<i>Secretary of the Faculty</i>	
FRANK PARKHURST BRACKETT, ¹ M.A.	The Observatory
<i>Director of the Observatory</i>	
MENDAL GARBUTT FRAMPTON, M.A.	Registrar's Office, Holmes Hall
<i>Acting Registrar</i>	
VICTOR EDWARD MARRIOTT, M.A.	Librarian
<i>Librarian</i>	
HOMER ELMER ROBBINS, PH.D.	Librarian
<i>Assistant to the President</i>	
MARION JEANETTE EWING, ² B.A.	
<i>Assistant Librarian</i>	
GEORGIA GRACE THOMAS	Holmes Hall
<i>Assistant Registrar and Assistant Secretary of the Faculty</i>	

Advisers

<i>Graduate Students</i> —	PROFESSOR LYMAN
<i>Senior Class</i> —	PROFESSOR BRACKETT, ¹ PROFESSOR NORTON
(first semester.)	
<i>Junior Class</i> —	ASSISTANT PROFESSOR MATLOCK
<i>Sophomore Class</i> —	PROFESSOR SUMNER
<i>Freshman Class</i> —	ASSISTANT PROFESSOR ROBBINS
<i>Department of Music</i> —	PROFESSOR BACON
<i>Department of Art and Design</i> —	ASSISTANT PROFESSOR JENKINS

¹Absent on leave, first semester, 1916-1917.

²Absent on leave, 1916-1917.

Other Officers

- NESBITT EVERETT JONES, B.S. 136 E. Ninth St.
Business Manager
- MARY LOUISE BILLINGS 541 Harvard Ave.
Accountant
- MARAH LOUISE JEWELL Sumner Hall
Matron of Sumner Hall
- MORRIS MARIE FOX Sumner Hall
Assistant in the Registrar's Office
- MERRA HELENA LORBEER, B.A. 365 E. Eighth St.
Acting Assistant Librarian
- MERTHA LILLIAN BARDWELL Claremont Inn
Assistant to the Business Manager
- MAROLD BURT, B.A. Smiley Hall
Graduate Manager of Student Activities and Assistant in the Gymnasium
- MORRIST GLENN HUTCHISON Blanchard Park
Superintendent of Grounds
- MARL MAURITZ CARLSON 922 Columbia Ave.
Superintendent of Buildings

Standing Committees for 1916-1917

With Place and Time of Meeting

Buildings and Grounds—(In conjunction with a committee the Board of Trustees)—Messrs. Stearns, Hitchcock, Belcher. Room 51, Library. On call.

Classification—Messrs. Frampton, Brackett (Norton), Sumner, Miss Berry, Messrs. Lyman, Matlock, Robbins. Room 7, 2 p. m., Friday.

College Life—Messrs. Norton, Brackett, Sumner, Miss Berry, Miss Squire, Messrs. Churchill, Bartlett, Matlock, Robbins, Jones, and Pecker. Room 8, 1:15 p. m., Friday.

Courses of Study—Messrs. Sumner, Lyman, Hilton, Pecker, Westergaard. Room 14, 10:30 a. m., Thursday.

Educational Efficiency—Messrs. Brackett, Frampton, Needham, Ewer, Parker, Crawford. Room 7, 1:15 p. m., Monday.

Faculty Meetings—Miss Berry, Messrs. Ewer, Marriott. Sumner Hall, After chapel, Monday.

Federated Clubs—Messrs. Pecker, Hilton, Jones, Brackett, Bissell, Edwards. Room 17. On call.

Graduate Work—Messrs. Lyman, Bissell, Belcher, Crawford. Room 36, 10:30 a. m., Tuesday. On call.

Library—Miss Spalding, Messrs. Marriott, Stoughton, Westergaard, Mertzke. 231 W. 5th Street, 8:00 p. m., the first Wednesday of each month. On call.

Physical Education—Messrs. Russell, Stoughton, Schofield, Nixon, Bartlett, Miss Squire. Room 8, 10:30 a. m., Tuesday.

Publications—Messrs. Churchill, Stearns, Hilton, Woodford. Secretary's Office. On call.

Public Events and Lectures—Messrs. Churchill, Hartley, Edwards, Flint, with Business Manager Jones. Secretary's office. On call.

Religious Interests—Messrs. Parker, Marriott, Matlock, Mr. Brown, Mr. Robbins. Room 58. On call.

Rooms—Messrs. Sumner, Churchill, Frampton. On call.

Rules—Messrs. Russell, Churchill, Frampton, Miss Berry. Room 2. On call.

Student Aid and Labor—Messrs. Bartlett, Matlock, Marriott, Mrs. Brown, Mr. Robbins. On call.

Summer School—Messrs. Bissell, Hilton, Jones. Room 2. On call.

GENERAL INFORMATION

Location and Surroundings

Claremont is situated on the Santa Fe and Pacific Electric railways, thirty-five miles from Los Angeles. It is connected with the Pacific Electric Railway with Pomona, which is four miles distant, on the Salt Lake and Southern Pacific roads. On the rim of an orchard-covered valley, which is hemmed in on all sides by lofty mountains, and with Mt. San Antonio in the immediate background, rising to a height of ten thousand feet, the location is one of rare beauty. Its water supply is taken from artesian wells at the base of the foothills. The town, which now numbers about 1800 inhabitants, owes its existence to the College and has the attractive features of the typical college town.

Buildings and Equipment

The College grounds consist of about one hundred acres, of which sixty are included in Blanchard Park, about ten in Alumni Field, and the remainder in the campus proper.

There are fourteen buildings on the campus, heated from a central heating plant.

The Mary L. Sumner Hall, named in memory of the wife of Professor Charles B. Sumner, is a dormitory affording accommodations for seventy women.

Holmes Hall, a memorial of Cyrus W. Holmes, Jr., of Monmouth, Massachusetts, reconstructed in 1916 in conformity with more modern plans for buildings and campus, is devoted mainly to chapel, recitation rooms, and various offices of administration.

Pearsons Hall of Science, the gift of Dr. D. K. Pearsons, contains the museum, and the laboratories and lecture rooms of the departments of chemistry, botany, physics and geology. In this building, too, is the Business Office.

The museum is equipped especially for the work in biology, botany and zoology. It contains an abundance of good synoptic material, including about two hundred and fifty thousand zoological specimens and an herbarium of about two hundred thousand sheets of plants. The Seaver-Rivers collection contains fifty thousand specimens of fossil Mollusca collected in the Pliocene of Santa Monica, California, by Dr. Rivers, former Curator of the Museum of the State University.

The chemical laboratories are equipped with hoods, gas generators, steam baths, and the usual appliances demanded for thoroughly good work. The department is equipped throughout with water, gas and electricity and has individual desks, and equipment for one hundred and eight students.

The physical laboratories are well equipped with apparatus selected from standard patterns of the best domestic and foreign instrument makers. Each year valuable additions are made to the equipment.

The biological laboratories contain an extensive series of skeletons and models for use in comparative anatomy. For laboratory work, in general and advanced zoology, there is abundant material, both wet and dry, from all parts of the world. The reference collections for use in general and special entomology are in many respects unexcelled.

The botanical equipment, besides the herbarium, has for use in general mycology a complete bacteriological outfit of sterilizers, incubators, and cultural apparatus.

All of these laboratories possess full batteries of microscopes and microtomes, and are well equipped with all the extensive apparatus and appliances necessary in anatomical, physiological, histological, and embryological work.

The Library, the gift of Mr. Andrew Carnegie, is an imposing structure, exceptionally well adapted to the purposes for which it was built.

The Frank P. Brackett Observatory, the gift of Mr. Llewellyn Bixby, '01, is designed throughout to be of service to the student in the direct study of the stars. It stands in an attractive spot upon an elevation in Blanchard Park. Its equipment includes

equatorial telescope, with a Clark objective of six inches aperture, and a mounting, which includes driving clock and other modern conveniences, made by Wm. Gärtner of Chicago, a three-inch astronomical transit and chronograph, both made by the Gärtner Company, a standard Riefler clock for mean solar time, and a less expensive clock for sidereal time; a horizontal telescope with a six-inch objective, having a focal length of forty feet and a cœlostæt. In connection with this is employed a thirteen-foot spectrograph with a two-inch objective, loaned by Mt. Wilson Solar Observatory.

The Albert K. Smiley Hall is the dormitory for men. It has twenty single rooms and suites of three rooms, affording accommodations for eighty students.

Rembrandt Hall, the first section of the Art Building, is devoted chiefly to the work of the Department of Art. The upper floor contains studio and work rooms; the lower floor a convenient auditorium of moderate size for exhibits and assemblies.

The Mabel S. Bridges Hall of Music, the gift of Mr. and Mrs. Appleton S. Bridges, of San Diego, recently completed, offers opportunities for the study of music unexcelled in Southern California. Besides numerous studio and practice rooms amply equipped with Steinway pianos, it contains a large auditorium, a four manual pipe organ and a large practice organ. The building is of reinforced concrete with Spanish tile roof.

The Renwick Gymnasium contains ample equipment for physical training, together with shower bath and locker facilities to make of the highest usefulness the swimming pool which adorns it.

The Claremont Inn has, besides a large student dining room and a club room for the College Commons, accommodations for thirty guests.

The Greek Theater, built to take advantage of the natural amphitheater of Blanchard Park, though uncompleted, has at present a seating capacity of over 4000. Here the great Historical Pageant was given in 1913; here are given the senior plays, various

concerts and entertainments; and here are held student ra about bonfires built in the center space.

The Harwood Hall of Botany, the gift of Mr. A. P. Harw of Upland, erected in the summer of 1915, is a commod building, containing lecture rooms and laboratories for the of the Department of Botany. Adjoining it is the Agricult and Botanical Laboratory, consisting of a greenhouse, a house and a central classroom.

The Marine Laboratory, located at Laguna Beach, has private rooms for special workers and two general laborato as well as storerooms, work rooms and aquarium room.

Various other smaller buildings add to the completeness the College plant.

The Library

The College possesses three library collections, the Cook-B Biological Library, the Astronomical Library, and the r College Library. The main library is housed in the Carn Library Building, the Cook-Baker Library (Zoology section Pearsons Hall of Science and (Botany section) in Harwood I and the Astronomical Collection in the F. P. Brackett Obsv tory. The two departmental libraries exist as independent lections but the intention is ultimately to have them all c logued in the main library, although continuing as separate partmental collections.

The main library is a collection of solid working mater Although not large it has been carefully selected and repres therefore a working library of exceptional value. Certain partments as English Literature, Economics, History, Biogra Biology, Education, Philosophy, and Psychology have mode endowments and are therefore proportionately better supp Other departments have only small allotments out of gen funds but are gradually being provided with endowments.

In connection with the main library there is a notable lection, the Mason California Collection, containing some the most important works bearing on early California histor

The Library is also a depository for the publications of the Carnegie Institution of Washington, and for the United States Government documents.

The growth of the Library in the last three years has been particularly rapid. June first 1913 there were 17,873 books in the library; June 1916, approximately 31,000 (not including the Anatomical Library), an increase of nearly one hundred per cent in three years.

The majority of the best scholastic journals are to be found on the periodical shelves in the main library. In addition to these a large number of technical journals are received in exchange for the scientific publications of the College and are kept on file in the departmental libraries.

Honors and Prizes

General Scholarship Honors and Special Departmental Honors are announced at the close of each semester.

General Scholarship Honors are awarded to those who have earned a grade of at least A in all courses pursued and are given only to matriculated students who are also candidates for a degree.

Special Departmental Honors are awarded to those who have earned AA grade in at least one course and have not fallen below B in any other.

The Dole Prizes. A prize debate, open to the Sophomores, upon some subject selected by the faculty, is arranged at the close of the second semester. First and second prizes of ten and five dollars respectively, established by the late Mr. J. L. Dole, in memory of his brother, Mr. W. B. Dole, are entered by Mr. J. Albert Dole and Mrs. A. M. Dole.

The Mudge Latin Prizes. Prizes for excellence in Latin are awarded to Sophomores completing Latin D13 and D14. First and second prizes of ten and five dollars respectively are entered by friends of the College.

The Llewellyn Bixby Mathematics Prize. A prize for excellence in Analytic Geometry and Calculus; open to all students

completing Mathematics C17 and C18. A prize of ten dollars is given by Mr. Llewellyn Bixby.

The Kinney Prizes. A prize declamation contest, open to members of the Freshman class, occurs toward the end of the first semester. First and second prizes of ten and five dollars respectively, are given by Mrs. H. N. Kinney.

The Vaile Prizes. Prizes for the best essay or oration on the general subject of Agriculture in Southern California; open to the Junior and Senior classes. First and second prizes of ten and five dollars respectively are endowed by Mr. Charles S. Vaile.

The Lorbeer Prizes. Prizes for the best essay on the subject "How to Keep Well"; open to all who take the course in Anatomy and Physiology. First and second prizes of five and ten dollars respectively are given by Dr. Thomas L. Lorbeer, '03.

The Moncrieff Astronomy Prize. A prize given to the student in the first year course in Astronomy, taken regularly, whose interest in the study and proficiency in the observational work are indicated by the best notebook kept in accordance with the teacher's suggestion. A prize of ten dollars is given by Miss Flossie C. Moncrieff, '11.

The George A. Gates Prize. A prize given for the best paper upon one of five subjects, dealing with social betterment, selected by the teachers of History and the social sciences. A prize of twenty-five dollars is endowed by certain Alumni and friends of Dr. Gates.

The Hager Prizes. Prizes for the best three essays on foreign missionary subject, open to all students. Prizes of five dollars each are endowed by Mr. and Mrs. C. R. Hager.

Foundations

THE JOSEPH H. JOHNSON FOUNDATION

The Joseph H. Johnson Foundation, liberally endowed by Miss Ellen Scripps, provides an annual income for the purpose of furnishing to the College for a protracted stay and

te participation in college life notable educators from other institutions. By this means such educators are annually in attendance in Pomona College. The opportunity of intimate contact with distinguished instructors thus afforded to undergraduates is a unique privilege, often surpassing the privileges of the class room of the institution from which these educators come.

THE HENRY D. PORTER FOUNDATION

The Henry D. Porter Foundation, named in honor of the late Dr. Henry D. Porter, for many years a missionary in China, comes to the institution annually, the extended stay of some eminent worker in the field of Christian Missions. The lecturer in this foundation commonly shares in the regular classroom work related to the history, geography, politics or religion of the region in which he has been actively at work. This vivid representation of the missionary life is one of the most stimulating features in the spiritual program of the College.

Phi Beta Kappa

A chapter of the national scholarship honor society, Phi Beta Kappa, was established at Pomona College, March seventh, 1914. Overclassmen "who are of good moral character, who are candidates for the degree of Bachelor of Arts, and who are distinguished for breadth of culture and excellence of scholarship," are eligible to membership.

The Association of Collegiate Alumnae

The Association of Collegiate Alumnae organized in 1899 by prominent college women for the "maintenance of high standards of education," and including at the present time forty-five leading universities and colleges, received Pomona College to membership in July 1915. By this action women graduates of Pomona College are eligible for membership in any of the local branches of the Association, and for any who are not within reach of such branches there is a provision for a general mem-

bership. The general membership fee of one dollar may be sent to Miss Katharine E. Puncheon, 5103 Pulaski Ave., Germantown, Pa. and entitles one to all membership privileges including the Quarterly Journal.

Oratorical and Debating Contests

Many opportunities are offered students for obtaining experience in public address. The Associated Students maintain three oratorical contests, the winners of which represent the College in intercollegiate competition, and there are each year college and freshman intercollegiate debates. A Women's Oratorical Contest for upperclass women is conducted by the College. The aim of these contests is to stimulate the student's excellence in public address, and to quickness of thought in impromptu speaking.

Student Activities

THE ASSOCIATED STUDENTS. This association harmonizes student activities. Its officers are chosen by the student body from their own number. All important questions are considered by its executive committee, which is composed of those prominent in such varied lines as athletics, oratory, and the editorship of the Student Life. This body has charge of intercollegiate as well as inter-class relations.

MEN'S ORGANIZATION. The men of the student body form a voluntary organization, electing their own officers and committees and holding regular meetings. This organization controls largely the class and social relations of the men.

WOMEN'S ORGANIZATION. The women of the student body form a similar organization for considering and regulating social relations of the women.

CHRISTIAN ASSOCIATIONS. Branches of the Young Men's Christian Association and the Young Women's Christian Association are well organized and doing effective work. Representatives

ion in the inter-collegiate and state conventions and the
its of active workers from outside serve to maintain interest
the work both at home and abroad. Through the co-operation
the associations and the College there have been established,
a part of the curriculum, courses in Bible study adapted to
classes of students and conducted by members of the faculty.

THE POMONA COLLEGE LITERARY SOCIETY, composed of both
n and women, meets every two weeks. The work is varied
character, covering all literary lines.

THE POMONA COLLEGE DEBATING CLUB is composed of men. It
ets every two weeks for prepared and impromptu debates on
live issues of the day.

THE ALPHA KAPPA is a society for women, giving drill in de-
ces and familiarity with important current topics.

THE POMONA COLLEGE LYCEUM, composed of men, is also a
oating club, and meets bi-weekly.

THE AREOPAGUS is composed of men. The object of the society
to promote efficiency in public speaking, debate, and parlia-
ntary drill. Meetings are held every two weeks.

THE DELTA LAMBDA is a debating society for women, meeting
weekly.

THE ADELPHI is a debating society for men, which meets bi-
ekly.

THE MASQUERS is an organization of students, whose purpose
the study and presentation of plays and the general pro-
tion of the dramatic enterprises of the undergraduate body.

PUBLICATIONS. The *Student Life* is published semi-weekly by
e student body and is devoted to current affairs.

The *Scribbler*, formerly the monthly magazine number of the
udent Life, is issued as an independent publication.

The *Metate* is published each year by the Junior class, and
ntains material appropriate to a college annual.

The *Association Hand Book*, which contains material of value,
pecially to new students, is issued at the beginning of the
ar by the Christian Associations.

ATHLETICS. The immediate management of all contests and games rests with the Associated Students, though all arrangements are under the supervision of a committee of the faculty and a student manager.

Alumni Field, consisting of about ten acres, has been developed by the alumni into athletic grounds unsurpassed in the Southwest in equipment and beauty of setting. First-class tennis courts, an excellent track, baseball and football fields, also hockey and basket ball courts are within the limits of the campus, and athletic exercises and field sports are encouraged by the officials of the institution.

A swimming pool, of the standard size for water polo, and fully equipped with modern appliances, is open to all students. An invariable condition to the use of the pool is a semi-annual medical examination.

Students are required to maintain a certain standard of excellence in all their studies in order to represent the College in any of its athletic teams or other organizations coming before the public.

Departmental Activities

THE CHORAL UNION is an organization of students and members of the community for drill in choral work. It meets every Thursday evening for practice under the direction of the Department of Music, and twice each year gives a public concert.

THE POMONA COLLEGE Glee Club, the Pomona College Women's Glee Club, the Pomona College Orchestra, and the Pomona College Band are flourishing organizations under the general direction of the Department of Music.

THE REMBRANDT CLUB is an organization of students and members of the community which meets once a month for study, programs on art subjects, and social intercourse.

THE ASTRONOMICAL SOCIETY aims to help the observatory in its work, in building up its library and in the issuing of its publications. The associate membership is drawn from the alumni and friends of the College, while the active membership

udes the students of astronomy together with members of the faculty and resident graduates.

THE BIOLOGICAL SEMINAR. The aim of the Biological Seminar is chiefly the review and discussion of recent and important researches as published in the biological journals. Membership is limited to students of the Junior and Senior classes chosen for excellent scholarship and marked interest in the work of the department, who meet every two weeks with the faculty of the Biological Department.

THE MATHEMATICAL SOCIETY. The Society of Mathematics and Physical Science meets every month for presentation and discussion of results of study and investigation in the physical sciences and mathematics. It is open to advanced students who are interested in these subjects and who agree to take an active part in its work.

THE LITERATURE SEMINAR. The purpose of the Literature Seminar is the presentation from a graduate or professional point of view of those masterpieces of literature which have dominated the content and form of other literature. The meetings are monthly and are open to students and community.

DER DEUTSCHE VEREIN is composed of those who have had at least three years of work in German. It meets every two weeks for the reading and discussing of papers in German and for other exercises which tend to cultivate fluency and accuracy in the use of the language.

LE CERCLE FRANCAIS, composed of students making a specialty of the French language, meets fortnightly for practice in French conversation, presentation of papers and discussion of topics relating to the various aspects of French life and literature.

EL CIRCULO ESPANOL, composed of students making a specialty of Spanish, meets fortnightly for practice in Spanish conversation and the presentation of appropriate papers in the language, bearing upon the literature and life of the Spanish world.

College Publications

Most of the publications of the College appear in The Pomona College Bulletin, which is issued bi-monthly.

Alumni and departmental publications include:

The Pomona College Quarterly Magazine, devoted to the interests of the College and Alumni.

The Journal of Entomology and Zoology, published under the auspices of the Department of Zoology.

The Publication of the Astronomical Society of Pomona College, published under the auspices of the Department of Astronomy.

Bureau of Appointments

A Bureau of Appointments is conducted in connection with the office of the Secretary of the Faculty for the benefit of members of the College who desire to teach after graduation. The purpose of the Bureau is to maintain a list of available positions and to recommend from the applicants registered those who are qualified for specific positions.

An opportunity is also offered graduates of the College who are already engaged in teaching, to register their present positions and to indicate whether they desire a change and, if so, under what conditions. An effort is made to further the desire of graduates so far as made known. The services of the Bureau are entirely gratuitous. Communications should be addressed to Professor M. E. Churchill, Secretary of the Faculty.

Music and Lecture Course

In order to insure to the entire student body the opportunity of hearing and seeing the great artists of the day whose public appearance is usually confined to the larger cities, the College introduces each year a group of the most distinguished masters in the various departments of achievement. For the lectures, concerts and other entertainments thus afforded an annual ticket is furnished to every student.

Registration

INFORMAL REGISTRATION—*Prospective Students.* All who desire to enter Pomona College should file their applications as early as possible. These applications should specify the class which the applicant desires to enter, the time when he wishes to enter, and the work he offers for entrance as well as for advanced credit if any. The statement of work done must be certified to by the proper officer. Specially prepared blanks for these applications are furnished upon request. In 1917 the freshman class will be limited to two hundred students, one hundred men and one hundred women.

Resident Students. On or before the first Saturday in January after the Christmas recess and the first Saturday in June all resident students must fill out, in consultation with their class advisers, a preliminary registration schedule designating their choice of subjects for the following semester. A fee of one dollar must be paid for any subsequent change.

FORMAL REGISTRATION. All students are required to register formally on one of the regularly announced registration days preceding the opening of the class work of each semester. A payment of two dollars is required for later registration, and a payment of one dollar for every change in formal registration. This latter payment is remitted in the case of new students registering for the first time, provided the changes are made within a week of the opening day of the registration period.

Students are admitted only to those courses for which they are formally registered.

Reports

A record of the scholarship and deportment of each student is kept, and deficient students are reported to the Registrar. Special reports are made at or near the Thanksgiving and Spring recesses; notification is sent to the parents of any students reported as deficient then, or at the end of the

semester. Grades will be sent at any time upon request parents.

The grade of scholarship is determined by the daily work of the class-room supplemented by frequent test reviews and by final examinations.

The aim is to encourage faithfulness and regularity in daily work rather than spasmodic effort to meet some single test.

Public Assemblies

Devotional exercises conducted by the President, the members of the faculty in turn, or by some invited guest, are held in the chapel Monday, Wednesday and Friday mornings, and all students are expected to be present.

On Thursday morning the regular and called meetings of the Associated Students are held from time to time. On Saturday morning opportunity is afforded the advisers to meet their respective classes for the presentation and discussion of the problems that ordinarily arise in the life of the undergraduate, as well as of those which in a more general way concern the student in his relations to the world at large.

Attendance upon the Sunday morning service in the Claremont Church is expected except in cases where permission is given to attend services elsewhere. Such permission will be granted on request.

General Requirements

Students are expected to be loyal to the spirit and purpose of the institution and to maintain regular attendance on all college appointments. Any who fall below grade in scholarship, or who for any reason do not prove desirable members of the student body, may be dismissed without specific charges.

It is urgently pointed out to both students and parents that the value of a college education consists in no small degree in the fullest participation in the college atmosphere and life. It is important, therefore, that all absence through the college

ar should be avoided. Some of the most important of the illege values are lost by absences on Saturday and Sunday, on which days are centered particular and vital phases of the mmon life, and it is therefore urged that over-Sunday visits at me or elsewhere be avoided.

The use of tobacco is disapproved and discouraged at all times. A copy of the Circular of Information may be obtained by application to the Registrar. It should be in the hands of all students.

Student Aid

SCHOLARSHIP FUNDS. The income of certain funds is used toward paying the tuition fees of students who are in pecuniary need, and, by authorization of the trustees, is distributed annually through a committee of the faculty. Scholarship aid is given only to students who are or intend to become candidates for a degree from Pomona College, who maintain a high standard of honor, who are economical in their habits, who do not use tobacco, who are regular in their attendance upon college exercises, and whose scholarship meets the following conditions: they must earn in each semester of the Freshman year at least twelve credits; in each subsequent semester at least fifteen credits.

Applicants for aid who have not yet entered college should forward to Acting Dean E. P. Bartlett, Chairman of the Committee on Scholarships, a formal application accompanied by two letters, one from parent or guardian and the other from principal or teacher, giving information concerning need, character and attainments. They should also send a certified statement of their scholastic record. All applications for aid must be renewed annually on or before May first.

Aid may be withdrawn at any time from students who prove not to have conformed to the conditions, and is permanently withdrawn after the second forfeiture due to low standing or unsatisfactory deportment.

Recipients of scholarship aid may be called upon to assist the College in ways that do not interfere with their studies.

\$4,000. The Lydia Phelps Memorial Fund, given by Hiram E. Phelps of Ontario, California, in memory of his wife.

\$1,000. The Agnes K. Crawford Memorial Fund, given by David R. Crawford and William Crawford of Pomona, California, in memory of their mother.

\$2,000. The John D. Potter Memorial Fund, given by Mrs. S. T. Potter of Westboro, Mass., in memory of her husband.

\$5,000. Given by Mrs. Loraine H. Page of Pomona, California. (\$3,000 of this may at some time be used for other purposes.)

\$1,500. The Francis Bancroft Memorial Fund, given by Mr. James T. Ford of Los Angeles, California, in memory of his father.

\$2,500. Given by Rev. James T. Ford of Los Angeles, California.

\$2,500. Given by Mrs. Maria T. Wardwell of Plymouth, Connecticut.

\$1,000. The Henry Herbert Brown Scholarship Fund, given by Mrs. Fannie E. Brown of Los Angeles, California, in memory of her son.

\$2,600. Given by Mary E. Elwood of Redlands, California.

\$3,500. The Mabel S. Bridges Memorial Scholarship, given by Mr. and Mrs. A. S. Bridges of San Diego, California, in memory of their daughter. Available for women.

\$1,000. The H. G. Billings Memorial Scholarship, given by Mrs. E. A. Billings of Los Angeles, California, in memory of her husband.

\$2,000. The Thomas F. Howard Memorial Scholarship given by Dr. and Mrs. H. G. Brainerd of Los Angeles, California, in memory of Mrs. Brainerd's father.

\$1,200. Given by Miss Jean Loomis, '97, of Nanking, China.

\$1,800. Given by Dr. Anna H. Searing of Escondido, California.

\$400 The Bristol Memorial Fund. A fund raised as a memorial to the Reverend Sherlock Bristol.

\$2,000. The Arthur Warren Phelps Memorial Scholarship, given by Mrs. C. S. and Mr. C. A. Phelps of Claremont in memory of their son and brother.

The College also administers a loan fund, established by George H. DeKay, Jr., in memory of his brother Frelin Campbell DeKay. By means of this fund, it is possible to co-operate in a moderate way, and temporarily, with the pressing need of students. This fund has been of such important service as to indicate the great need for the increase of such resources, which in the hour of special emergency may often save a student to a college career.

SELF-SUPPORT. A committee of the faculty endeavors to find employment for students needing to earn a part of their expenses. Many are thus helping themselves by various forms of work, such as janitor work, waiting on tables at the Commons, general house work, gardening and the like. The most desirable positions are in general secured by upper-classmen who have proven themselves good workers and good students, and those coming to the College for the first time should be content with any work which they can satisfactorily do is secured for them. Students in any case should come prepared to pay all bills for at least one semester. Their record during this semester will be a major factor in deciding what opportunities for self-help will be given to them. Applications for aid in securing employment should be addressed to Acting Dean E. P. Bartlett, the chairman of the Committee on Student Aid and Labor.

Physical Attention

The physical care of students is a matter of special concern at the College and the advantages of unusual attention and opportunity are offered. The climate of Southern California offers an out-of-door life the year around. Oversight is given to open-air athletics in all seasons. A regular physician is on the faculty at the College under whose direction every student on entering has a physical examination. Regular work in Physical Culture

is prescribed throughout the four years, and courses in Physiology and Hygiene are given. A large swimming pool is provided, access to which is free to all students, subject only to a seasonal annual physical examination. The medical advice of the college physician is ordinarily available free of charge to all students, subject to certain conditions of hours and location of residence, the College meeting these bills; providing that nursing, surgical dressing, and medicines are at the expense of the ill or injured. *The College, however, reserves the right to discontinue this individual medical service at any time without previous notice.* As a natural result of all this attention to the health of the College is such as to give special assurance to those considering attendance at Pomona.

Expenses

ROOMS. Lists and descriptions of rooms available for students are kept at the Business Office, for women students at Sumner Hall. Furnished rooms outside the College buildings are rented at prices ranging from twenty to forty-five dollars for the semester. Students are permitted to room only at places approved by the faculty.

To avoid misunderstanding between students and room holders, it is advised that agreements regarding rooms be made in written form. Unless written agreement to the contrary is made, it will be assumed that rooms are rented for one semester.

Change of rooms is made only by permission of the faculty.

DORMITORIES—Sumner Hall. Women not living at their homes, unless excused by the faculty, are expected to room at Sumner Hall, which accommodates seventy. This is a commodious and pleasant hall, where the young women come under the direct care of the Dean of Women. In addition to the parlors, which are open to the students for the reception of their friends, there is also on the first floor a large and attractive recreation hall.

Sumner Hall is well equipped with all modern conveniences.

uding electric lights, steam heat, baths, and a laundry furnished with stationary tubs and electric irons for the use of men.

There are both single and double rooms, which are well lighted and ventilated. Each room is provided with the necessary furnishings, including rug for the floor. The only articles to be supplied by the students are towels, and linen and covers for single bed.

Careful attention is given to the health of the young women residing in the Hall. Illness is rare, yet for such cases as occur, care is provided, opening directly from the matron's room, a pleasant, sunny rest-room, where patients are given the best care.

Rooms in Sumner Hall are rented for the year at prices ranging from forty to seventy dollars, according to the location and desirability of the room and the number of occupants. The Hall is closed during the Christmas and Spring vacations. A deposit of five dollars is necessary to secure a room in the Hall, and must accompany the application. Rooms are assigned in order of application. The deposit fee is credited on the rent of the room.

Information concerning the dimensions of rooms, number of windows, and similar matters, may be obtained at the business office. The Hall is opened on the Saturday before the beginning of the College year and closed the Saturday after Commencement.

Smiley Hall. This dormitory for men has both single rooms and suites of three rooms accommodating two students. The dormitory has all modern conveniences and is completely furnished. The only articles to be provided by the students are towels, and linen and covers for a single bed. All rooms are equally desirable, the basis of choice in most cases being one's preference for the eastern or western outlook.

Rooms in Smiley Hall are rented for the College year, each occupant paying sixty dollars. In case of withdrawal because of sickness an equitable adjustment of rent will be made.

These terms do not include the use of the dormitory during the Christmas and Spring vacations, when the Hall will be closed, unless a number desire to remain, in which case the charge of keeping the building open will be an additional charge. Damage to rooms will be charged to the occupants.

A deposit of five dollars is necessary to secure a room, and should accompany the application. This amount will be retained as a breakage fee from which deductions will be made for individual and communal damages to the building, the balance being returned at the end of the year. The dormitory is opened on the Saturday before the beginning of the College year and closed the Saturday after Commencement.

The College reserves the right to dismiss from the dormitory without rebate any student who has shown himself a disturber or undesirable occupant.

BOARD. In the College Commons, an unusually attractive and well equipped dining-room in the Claremont Inn, provision is made for the boarding of students under the direct management of the College. A representative committee of students and faculty cooperate in maintaining satisfactory conditions. The rates are the lowest consistent with good quality of food and service, being ninety-two dollars for a semester's meals, payable in four installments.

The Pomona College spirit is due in no small measure to the common dining hall. There the students meet in pleasant surroundings, are waited upon by companions in study, discuss together college topics, join in enthusiastic backing of college teams and glee clubs and have favorable opportunities for forming close and lasting friendships. For these reasons and for its unifying influence on college life, the faculty regard it as exceedingly desirable that students should board at the Commons.

Those wishing to board at other approved places may do so by permission of the faculty, but such permission will rarely be given to those living in the College buildings.

SUMMARY OF EXPENSES—The necessary expense for the college year, exclusive of fees for special courses and expenses

are purely personal, varies from \$275 to \$400. Bills are each semester in advance and must be paid upon registration. Parents desire bills to be sent home, written request should be made before the beginning of a semester.

A student will be retained in the institution or given honorable dismissal whose bills are not paid or arranged for.

Tuition

Tuition bills must be paid at the beginning of each semester. Until this has been done cards entitling the student to admission to classes will not be issued.

The regular charge for tuition is composed of two items; General Charge, uniform in amount, which is required of all students, and an Instruction Charge, varying with the amount of work taken.

GENERAL CHARGE

Required of all students, per semester (18 weeks).....\$17.50

INSTRUCTION CHARGE

In all branches there is a further Instruction Charge varying according to the number of Credit Hours assigned to each course. The normal amount of work varies from 16 to 18 credits.

For each hour taken, per semester (18 weeks).....\$2.00

ADDITIONAL CHARGE FOR APPLIED MUSIC AND ART

In addition to the General Charge and the Instruction Charge, students taking Applied Music or Art will pay an Additional Charge as follows:

For half-hour private lessons in piano, voice, organ

or violin, per semester:

Two lessons a week	\$50.00
One lesson a week	\$25.00

For two-hour class lessons in Art, per semester:

Two lessons each week	\$2
One lesson each week	
Pen and Ink, one lesson each week for 9 weeks.....	
Sketch Class	

Students may register for applied music and art at time. Such students, if they enter during a semester, should consult the Registrar as to charges.

Visitors not regularly enrolled are charged a minimum of five dollars and an extra fee of one dollar an hour for work in excess of three hours.

Fees

Diploma fee, \$5.00.

Physics and Chemistry, deposit for breakage, \$5.00.

Laboratory fees range from \$4.00 to \$15.00. The exact fee for a given course is stated in connection with the description of that course under Departments of Instruction; in advance of courses only does it exceed \$10.00.

Practice fees for the use of college pianos and organs:

Piano

One half hour daily (students of Voice only) per semester	\$
One hour daily, per semester	
Two hours daily, per semester	
Three hours daily, per semester	1

Pedal Piano

Three hours weekly, per semester	
--	--

Practice Organ

Three hours weekly, per semester	
Six hours weekly, per semester	1

Large Organ

One hour weekly, per semester	
(Advanced pupils only.)	

RETURN OF TUITION

The General Charge of \$17.50 is retained from the tuition of students withdrawing within two weeks subsequent to the first of registration of any semester. After that time there is no refunding of any part of the tuition either for courses dropped or for failure to complete a semester's residence, except one half of the Instruction Charge and of the Additional Charge, if any, is refunded to any leaving college before the middle of any semester on account of illness. Courses dropped after October 15th are entitled to no refund.

Requirements for Admission

General Requirements and Methods of Admission

It is the purpose of Pomona College to do a distinctly and notably high grade of work, thus preparing its graduates to special distinction in such later callings as they may choose. To this end the College wishes to receive only such students as are thoroughly prepared to enter upon college work. Students planning to enter Pomona College should indicate this purpose as early as possible. As the College authorities carefully scrutinize all applications for admission, delay in filing applications inevitably involves delay in acceptance. Another reason for early application is the limitation in numbers of the Freshman class.

Tentative applications may well be made several years in advance, in which case the College will cordially interest itself in advising such applicants from time to time regarding the best preparation for admission. In this respect the good offices of the College are freely at the call of all interested inquirers. The first list of accepted candidates is issued in the February preceding the fall of admission, and it is highly desirable that the intentions of the prospective candidates should be known by that time.

Candidates for admission to any class in Pomona College must present satisfactory evidence of their fitness for college both in character and in scholarship. Testimonials of good moral character and a certificate of honorable dismissal from the last institution attended are required. A medical examination conducted by an authorized physician, under the direction of the Department of Physical Education, is required of all students. Evidence of satisfactory scholarship and of the completion of the required amount of study as indicated in the following pages may be given in one of three ways:

First: Examination by the College.

Students wishing to remove deficiencies by examination must do so before entering upon college work. Such examinations must be taken during the first three days of registration week of either semester or (by special arrangement) the week preceding the College commencement. They must be arranged for in advance through the Registrar.

Second: Certificate of the College Entrance Examination Board.

Examinations are given by the College Entrance Examination Board at certain times and places which may be learned from the Registrar or from principals of secondary schools.

Third: Certificate from approved schools or colleges.

Students from approved schools or colleges are admitted without examination on presentation of a certificate signed by the principal or proper official and showing in detail the requisite completed courses. Certificate blanks obtained from the College should be filled out and returned as early as possible after the completion of the high school year.

Requirements for Matriculation

The standing of all students is provisional until after they have been in residence for one semester. At that time those who have matriculated who have shown themselves in accord with the spirit of the College, who have done a satisfactory quality of work during their semester of residence and whose entrance requirements have been accepted.

Admission to Freshman Standing

The number of students admitted to the freshman class is limited to two hundred—one hundred men and one hundred women; early application is therefore advised. Special blanks for this purpose may be had by addressing the Assistant to the President. Applications are listed in the order of their receipt, are considered individually, and in every case must be accompanied by a certification both as to scholarship and character.

No application is considered which does not show fifteen units in accepted subjects, at least twelve of which are recommended. Special endorsement by the Principal must accompany all papers showing non-commended units, such endorsement to include the specific recommendation of the candidate, both as to character and ability, for the undertaking of college work. Not later than the first of July a notification is sent to those whose credentials are satisfactory and from time to time other applicants are so notified. No applicant, however, is finally enrolled among those definitely accepted, until the sum of \$17.50 has been deposited with the College as a first payment on tuition. This sum is returned upon request received before the first of August but not thereafter.

Those are matriculated to full standing who at the end of a semester's residence meet the requirements stated just above; those who do not meet those requirements are not allowed to matriculate and are enrolled as in partial standing. No student in partial standing is recommended to college standing at another institution. The final acceptance of entrance units is based upon the character of the work done in class at Pomona College as well as upon the grade of the units presented.

Admission to Advanced Standing

Students who have sufficient credit from other institutions are admitted to advanced standing on credentials signed by the proper officials and giving full specifications concerning the nature of the courses taken, the time spent in each, together with their rank in each subject. They are assigned hours and credits¹ on the basis of their credentials, but such assignment is provisional until ratified by the Classification Committee. This ratification is not given until after the required semester's residence, at which time the Committee has power to act in adjusting hours or credits, or both, to the qualifications shown.

¹Credits are based upon the grades attained in the work offered.
See Page 58.

Admission as Special Students

ature students, ordinarily only such as are at least twenty-years of age, may be admitted as special students to courses which by ability and preparation they may be fitted. al students are not candidates for a degree.

Credits for Non-Commended Work

udents who enter with some of their work non-commended remove their deficiency in one of three ways—by examination, by continuing the same line of study in college with grade or by extra work in college not counted towards a ee. These three methods are more fully described as fol-

rst: Students may be examined upon any of the accepted ects presented for entrance, and upon passing with B grade ive credit toward entrance for that subject. Such examin-ns must be taken as specified on page 49.

second: Entrance credit will be given for non-commended k after a student has completed with A grade two or more ege courses in the same or a closely allied subject, or up-conditions laid down in individual cases by the Classification mmittee.

third: Entrance credit may be gained by work in certain ege courses, but such courses cannot count toward the ber of hours or credits required for graduation, nor for ors. Moreover, students may not substitute for subjects ifically required for entrance other subjects taken in this

tudents are not candidates for a degree nor are they eligible recommendation to college standing in another institution l they have matriculated. Students are matriculated only r they have come into full standing. All students must be riculated before attaining to Junior standing.

Courses Required for Admission to Freshman Standing

In the following outline of courses a "unit" represents a course of study in one subject of high school grade involving five forty-five minute recitations per week or an equivalent in a school year. Laboratory periods should be at least twice the length of recitation periods.

Not less than one unit in any subject is normally accepted, though a half unit may be accepted when accompanied by one unit for courses in allied subjects.

I. *Specific Requirements—8 units*

English, 2 units	Algebra, 1 unit
History, 1 unit	Geometry, 1 unit
One foreign language, 2 units	¹ One third or fourth year laboratory science, 1 unit

II. *Additional Requirements—4 units*

Selected from the following:

English	Mathematics
History	¹ Laboratory Science
Foreign Language	

III. *Elective—3 units*

It is recommended that these electives be chosen from subjects of Group II above, but in view of the importance of other lines of high school work credit is allowed for full units in other courses counted for high school graduation the acceptance of which is specifically recommended by the principal of the school.

Description of Subjects

The College recommends that the work offered to meet requirements of Groups I and II above shall cover the group

¹Heads of Departments in which students wish to continue laboratory subjects begun in high school may, at their option, require the high school note books to be submitted as evidence of ability to continue with more advanced work in the department.

ated in the following description of courses. Each of
constitutes one unit unless otherwise designated.

Elementary English.

Rhetoric, composition and literature. (2 units.)

Intermediate English.

Advanced English.

The following list is made the basis of examination. A in-
cludes books selected for careful reading; B those requiring
study.

From each of the following groups at least two selec-
are to be made, except as otherwise provided under
up I.

Group 1—Classics in Translation

The Old Testament, comprising at least the chief narrative
odes in Genesis, Exodus, Joshua, Judges, Samuel, Kings,
Daniel, together with the books of Ruth and Esther; the
sey, with the omission, if desired, of Books i-v and xv-xvii;
liad, with the omission, if desired, of Books xi, xiii-xv, xvii,
xxi; the Aeneid should be read in English translations of
gnized literary excellence.

For any selection from this group a selection from any other
p may be substituted.

Group II—Shakespeare

A Midsummer Night's Dream; Merchant of Venice; As You
Like It; Twelfth Night; The Tempest; Romeo and Juliet; King
Richard II; Richard III; Henry V; Coriolanus; and the
wing if not chosen for study under B, Julius Cæsar; Mac-
beth; Hamlet.

Group III—Prose Fiction

Malory's Morte d'Arthur (about 100 pages); Bunyan's Pil-
grim's Progress, Part I; Swift's Gulliver's Travels (voyages to
Lilliput and to Brobdingnag); Defoe's Robinson Crusoe, Part I;
Dickens's Vicar of Wakefield; Frances Burney's Evelina;
Scott's Novels, any one; Jane Austen's Novels, any one; Maria
Edgeworth's Castle Rackrent, or The Absentee; Dickens's Novels,
any one; Thackeray's Novels, any one; George Eliot's Novels,
any one; Mrs. Gaskell's Cranford; Kingsley's Westward Ho!
The Harewood, the Wake; Reade's The Cloister and the Hearth;
Hemans's Lorna Doone; Hughes's Tom Brown's Schooldays;
Trevelyan's Treasure Island, or Kidnapped, or Master of Bal-
conae; Cooper's Novels, any one; Poe's Selected Tales; Haw-

thorne's *The House of the Seven Gables*, or *Twice Told Tales*; or *Mosses from an Old Manse*; a collection of *Short Stories* by various standard writers.

Group IV—Essays, Biography, Etc.

Addison and Steele's *The Sir Roger de Coverley Papers*; *Selections from the Tatler and Spectator* (about 200 pages); Boswell's *Selections from the Life of Johnson* (about 200 pages); Franklin's *Autobiography*; Irving's *Sketch Book* (about 200 pages), or *Life of Goldsmith*; Southey's *Life of Nelson*; Lamb's *Essays of Elia* (about 100 pages); Lockhart's *Life of Scott* (about 200 pages); Thackeray's *Lectures on Swift, Addison, and Steele in the English Humorists*; Macaulay's *Clive, Warren Hastings, Milton, Addison, Goldsmith, Frederick the Great, Madame d'Arblay*, (any one); Trevelyan's *Life of Macaulay* (about 200 pages); Ruskin's *Sesame and Lilies* *Selections* (about 150 pages); Dana's *Two Years before the Mast*; *Selections from Lincoln*, including at least the two inaugural, the *Speeches in Independence Hall* and at *Gettysburg*, the *Last Public Address*, and the *Letter to Horace Greeley*, together with a brief memoir or estimate of Lincoln; Parker's *The Oregon Trail*; Thoreau's *Walden*; Lowell's *Selected Essays* (about 150 pages); Holmes's *The Autocrat of the Breakfast-Table*; Stevenson's *An Inland Voyage and Travels with a Donkey*; Huxley's *Autobiography* and selections from *Lays of the Monks*, including the addresses on *Improving Natural Knowledge*, *A Liberal Education*, and *A Piece of Chalk*; a collection of *Essays* by Bacon, Lamb, DeQuincey, Hazlitt, Emerson, and other later writers; a collection of *Letters* by various standard writers.

Group V—Poetry

Palgrave's *Golden Treasury* (First Series): Books II, III, with special attention to Dryden, Collins, Gray, Cowper, Burns; Palgrave's *Golden Treasury* (First Series), Book IV, with special attention to Wordsworth, Keats, and Shelley (if chosen for study under B); Goldsmith's *The Traveller* and *Deserted Village*; Pope's *The Rape of the Lock*; a collection of *English and Scottish Ballads*, as, for example, some of the *Hood ballads*, *The Battle of Otterburn*, *King Estmere*, *Yewdale*, *Beichan*, *Bewick and Grahame*, *Sir Patrick Spens*, and a selection from later ballads; Coleridge's *The Ancient Mariner*, *Christabel*, and *Kubla Khan*; Byron's *Childe Harold*, Canto III, or IV, and the *Prisoner of Chillon*; Scott's *The Lady of the Lake*, or *Marmion*; Macaulay's *The Lays of Ancient Rome*, *The Battle of Naseby*, *The Armada*, *Ivry*; Tennyson's *The Princess*.

r Gareth and Lynette, Lancelot and Elaine, and The Passing of Arthur; Browning's Cavalier Tunes, The Lost Leader, How they Brought the Good News from Ghent to Aix, Home Thoughts from Abroad, Home Thoughts from the Sea, Incidents of the French Camp, Hervé Riel, Pheidippides, My Last Duchess, Up at a Villa—Down in a City, The Italian in England, The Patriot, The Pied Piper, "De Gustibus"—, Instans Tyrannus; Arnold's Sohrab and Rustum, and The Forsaken Merman; selections from American Poetry, with special attention to Poe, Lowell, Longfellow, and Whittier.

B. This part of the requirement is intended as a natural and logical continuation of the student's earlier reading, with greater stress laid upon form and style, the exact meaning of words and phrases, and the understanding of allusions. The books provided for study are arranged in four groups, from each of which one selection is to be made.

Group I—Drama

Shakespeare's Julius Cæsar, or Macbeth, or Hamlet.

Group II—Poetry

Milton's L'Allegro, Il Penseroso, and either Comus or Lyidas; Tennyson's The Coming of Arthur, The Holy Grail, and The Passing of Arthur; the selections from Wordsworth, Keats, and Shelley in Book IV of Palgrave's Golden Treasury (First Series).

Group III—Oratory

Burke's Speech on Conciliation with America; Macaulay's Two Speeches on Copyright, and Lincoln's Speech at Cooper Union; Washington's Farewell Address, and Webster's First Bunker Hill Oration.

Group IV—Essays

Carlyle's Essays on Burns, with a selection from Burns's Poems; Macaulay's Life of Johnson; Emerson's Essay on Manners.

Ancient History to the Coronation of Charlemagne with special reference to the history of Greece and Rome. (Myer's Ancient History or equivalent.)

Medieval and Modern History, a year's work based on a text-book, but including reference reading and note-book work. (Myer's Middle Ages and Myer's Modern Age or equivalent.)

English History, including text, reference and note-book work

for one year. (Andrews's History of England or equivalent.

United States History and Civil Government. (Channing's Students' History and Ashley's Federal State or equivalent.)

Greek lessons and grammar.

Xenophon, four books of the Anabasis, and composition.

Homer, three books of the Iliad, with prosody; ability to read easy Greek at sight.

Latin lessons and grammar.

Cæsar, Commentaries (Books I-IV).

Cicero, seven orations, including those against Catiline and for the poet Archias, and the Manilian Law.

Virgil, six books of the Aeneid and prosody.

Grammar, composition and sight reading are required as a portion of each year's work.

Elementary French. One year of French; elements of grammar; ability to write at dictation and to translate from English reading of about one hundred and fifty pages of text.

Intermediate French. Additional work in French, amounting to one year's advanced work in translation and composition.

Advanced French. The ability to read at sight any piece of modern prose or poetry and to write in French a paper on an assigned subject.

Elementary German. One year of German, elements of grammar; ability to write at dictation and to translate from English reading of about one hundred and fifty pages of text.

Intermediate German. Additional work in German amounting to one year's advanced work in translation and composition.

Advanced German. The ability to read at sight any piece of modern German prose of moderate difficulty and to write in German a paper on an assigned topic.

Spanish (1 or 2 units). Including an accurate knowledge of the essentials of grammar, ability to write ordinary Spanish and to read ordinary Spanish prose.

Elements of Algebra, with special attention to factoring and solution of equations, and including ratio and proportion.

Algebra ($\frac{1}{2}$ unit), being a continuation of the course in the elements of Algebra with special emphasis on algebraic theory.

Algebra ($\frac{1}{2}$ unit). Quadratics and indeterminate equations, irrational and imaginary numbers, ratio, proportion and variations, in review; also theory of exponents, progressions, undetermined co-efficients and logarithms.

Plane Geometry, with original exercises and problems in mensuration.

Solid Geometry ($\frac{1}{2}$ unit). With original exercises and problems.

igonometry ($\frac{1}{2}$ unit). Elementary course in plane trigonometry.

ysics, covering an elementary knowledge of dynamics, and, light, heat, magnetism and electricity; recitation and laboratory work.

chemistry, including classroom and laboratory work in the elements of chemistry as presented in modern standard texts on the subject. At least five exercises a week for one

ysical Geography, covering the descriptive and explanatory of the commoner phenomena of nature, including satisfactory laboratory and field work.

tany, covering the morphology and simpler physiology of higher plants, including some acquaintance with the local

ology, emphasizing, in a general course, scientific methods training rather than facts.

Extra Entrance Credits

by examination or by certificate, a student presents more than fifteen units of commended work for admission he may, after the lapse of a semester and upon formal application, receive college credit for certain subjects, provided that these subjects, or others closely allied, have been continued in college with high grade, one unit of commended work being allowed for three hours of college credit. Extra credit is thus allowed in foreign language, advanced mathematics and advanced science. Credit, varying in amount with the individual courses, is granted for graduate work in approved high schools.

Requirements for Graduation

Bachelor of Arts Degree

The courses of study offered by the College lead to degree of Bachelor of Arts.

These courses include certain required studies, but also a wide range of electives in language and literature, philosophy, economics, history, mathematics, science and fine arts.

Hour Requirements

One hundred and twenty-six hours of work are required for graduation. An "hour" consists of one recitation or lecture period, or one laboratory period a week for one semester. One recitation or lecture period covers fifty-five minutes; a laboratory period covers, in general, the time of three such periods. Ninety hours of the one hundred and twenty-six are in Physical Education. In order to complete the course in four years one must take an average of fifteen hours of academic work per semester throughout the four years.

Credit Requirements

In addition to the requirements of hours, as stated above, there is required for promotion from class to class and for graduation a certain number of "credits." Details regarding credits are published in the "Manual of Procedure."

Graduation With Honors

Those students who have two hundred or more credits are graduated with the honor *cum laude*; those who have one hundred and fifty or more credits are graduated with the honor *magna cum laude*; and those who have three hundred or more credits are graduated with the honor *summa cum laude*.

Group Requirements

In the selection of his work the student is given a large range of choice. The only limitations are such as will insure him, on the one hand, the breadth of view which may be gained by an introductory study of each of the great realms of knowledge; and, on the other, that concentration along some chosen line of work which shall develop power of thought and an actual fund of knowledge in some particular field. To this end the student will select a limited amount of work from each of certain groups. Some of these courses, because of their value in mental training and as the basis for later work, are placed in the Freshman and Sophomore years.

Further details concerning these courses may be found under Departments of Instruction."

Subject Requirements

English Composition—4 hours, Freshman year.

English Literature—6 hours, Freshman or Sophomore year.

French or German—12 hours, Freshman and Sophomore years.

History—6 hours, Freshman or Sophomore year, except for those who enter with credit for three units of History.

Mathematics—6 hours, ordinarily Freshman year, except for those who enter with credit for three units of Mathematics. Such may substitute a year of work in science for the required mathematics; this science may be used to meet the requirement in science immediately following.

Physics, Chemistry, Zoology, Botany or Physiology—6 hours, Freshman or Sophomore year. A student who enters with only one unit of science must take 6 hours of another line of science and, in general, it is expected that one will take in college at least 6 hours in science in a different line from any presented for entrance.

Physical Education—4 hours in Freshman and Sophomore years and 2 hours in Junior and Senior years.

Economics—6 hours, usually Sophomore or Junior year.

Philosophy and Psychology—6 hours, Sophomore or Junior year.

In addition to these requirements, there is a general requirement of 36 hours of C and D work of which at least 9 must be D work.

Students who have shown special ability in one line of work may, with the consent of the head of the department, enroll for a departmental major. This major includes, usually, at least 18 hours in the department chosen, together with certain courses in allied subjects, and usually a reading knowledge of French and German. The student plans his work in consultation with the head of the department as well as with his class adviser. Certain prerequisites, differing with the subject chosen, are indicated for each major. A final examination or thesis or both may be required.

Students who desire to become candidates for a departmental major should indicate such intention as early as possible, and must be registered as candidates for such departmental major not later than the first week of registration in their Senior year.

The student who completes a departmental major receives in addition to his diploma the special commendation of the department.

Curriculum

An *outline* of the work which leads to graduation is here given by years. Following this scheme is a *list* of the definite courses from which the work may be chosen. A more complete *description* of each course may be found under "Departments of Instruction."

Each "*hour*" represents one recitation or laboratory period per week for one semester.

Freshman Year

Hygiene	2 hours
Physical Education	2 hours
English Composition	4 hours
French or German	6 hours

History ¹ or English Literature ² , or Greek, or Latin.....	6 hours
Mathematics ⁶	6 hours
Lective from the above or from Art, Bible, Biology, Chemistry, Engineering, English, Music or Physics.....	6 hours

Sophomore Year

Physical Education	2 hours
French or German ³	6 hours
English Literature ² or History ¹	6 hours
Physics, Chemistry, Botany, Physiology or Zoology ⁴	6 hours
Lective from the above or from Art, Bible, Engineering, Economics and Sociology ⁵ , Mathematics, Music, Psy- chology and Philosophy ⁵ or Spanish	12 hours

Junior and Senior Years

Physical Education	2 hours
Economics and Sociology ⁷	6 hours
Philosophy and Psychology ⁷	6 hours
Lective ⁸	42 hours

¹Must be taken in Freshman or Sophomore year, unless 3 units History have been accepted for entrance.

²Must be taken in Freshman or Sophomore year.

³Must continue any language begun in Freshman year.

⁴Unless the Science requirement was met Freshman year.

⁵Since 6 hours each of Economics and Sociology, and of Psychology and Philosophy must be taken during the course, it is recommended that one of these subjects be elected in Sophomore year.

⁶A science may be substituted, if 3 recommended units of Mathematics have been presented for entrance; this may be counted fulfilling the general science requirement.

⁷Unless already taken.

⁸At least 9 hours being in D courses, and not over 6 in B courses.

List of Courses¹

Open to Freshmen (and Sophomores)

Art A1-A2, Elementary Course (6).

Biblical Literature A1 and A2, Contents of the Bible (2).

Biology A1-A2, General Biology (6).

Chemistry A1 or A2, Elements of Chemistry (4).

A3 or A4, Systematic Chemistry of the Metals (3).

B5 or B6, Systematic Chemistry of the Non-metals (3).

B31 or B32, Inorganic Preparations (1).

B33 or B34, Qualitative Analysis (2).

B35 or B36, Qualitative Analysis (2).

¹Courses connected by a dash may be taken separately; those connected by "and" are to be taken consecutively.

- Engineering A1 and A2, Graphics (4).
English A1 and A2, American Literature (6).
 A21 and A22, Composition (4).
 A35 and A36, Elementary Public Address (4).
 B3 and B4, Development of English Literature (6).
 B3a, Medieval Literature (3).
French A1 and A2, Elementary Course; Modern Prose and Drama (6).
 B3-C4, Nineteenth Century Novel (6).
 B3' and C4', Composition (4).
German A1 and A2, Elementary Course (6).
 A13 and B14, Intermediate Course (6).
 B1' and B2', Composition (2).
 B3, Prose Narrative and Drama (3).
 B4, Schiller (3).
 B3' and B4', More Advanced Composition (2).
 C19-C20, Advanced German Prose (6).
Greek A1 and A2, Elementary Greek (6).
 B3-B4, Lysias; Plato (6).
 B3' and B4', Composition (2).
History A7-A8, English History (6).*
 A17 and A18, General European History (6).
 A13 and A14, Ancient Classical (6).*
Latin A1 and A2, Elementary Latin (6).
 A3 and A4, Vergil; Cicero (6).
 B5-B6, Cicero and Livy; Horace (6).
 B5' and B6', Composition (2).
Mathematics A1, Solid Geometry; A2 Plane Trigonometry (6).
 A3-B4, Algebra (6).
 A5 and A6, Elementary Analysis (6).
 A9-A10, Algebra; Trigonometry (6).
 B7-B8, Analytic Geometry and Calculus (6).
Music A1 and A2, Elementary Course (4).
Physical Education A1 and A2, Gymnastics (2).
 A11 and A12, Gymnasium Practice (2).
Physics B1-B2, Mechanics and Sound; Heat, Magnetism, Electricity and Light (8).
Physiology A1 and A2, Applied Physiology and Hygiene (2).
 B19 and B20, Folk and National Dances.

*Courses starred are not given in 1916-1917.

List of Courses

Open to Sophomores (and Upperclassmen)

- B courses listed above and such A courses as are permitted by classification adviser.
- B3-B4, Still Life, Perspective, Composition (6).
- Classical Literature B3, Preservation and Transmission of the Old Testament (1).
- B4, Preservation and Transmission of the New Testament (1).
- B21-B22, Ancient Oriental History and Literature (6).
- any B21-B22, General Botany (6).
- Chemistry C7-C8, Elementary Quantitative Analysis (6).
- C9 and C10, Systematic Organic Chemistry (6).
- Economics B1 and B2, Introduction to Economics (6).
- B21 and B22, Elements of Sociology (6).
- Engineering B3 and B4, Graphics (4).
- C11 and C12, Surveying (6).*
- English B3 and B4, Development of English Literature (6).
- B3a, Medieval Literature (3).
- B23, Composition (3).
- B24a and B23b, Composition (4).
- C28, Short Story (3).
- B31, Argumentation (3).
- B32, Public Address (3).
- Geology B2, Dynamic and Structural Geology (3).
- German C9-C10, Nineteenth Century Novel (6).
- C9' and C10', Composition and Conversation (2).
- Greek B13 and B14, Greek Literature and Life (6).
- C5-C6, Aeschylus and Sophocles; Demosthenes (6).
- History B1-B2, Medieval; the Renaissance and Reformation (6).
- B19, American Colonial Government (3).
- Latin C7-C8, Pliny; Plautus (6).
- C7' and C8', More Advanced Composition (2).
- Mathematics B13-B14, Analytic Geometry and Calculus (6).
- B15, Spherical Trigonometry (2).
- C15-C16, Descriptive Geometry and Perspective (6).
- C17-C18, Advanced Analytic Geometry and Calculus (6).
- Music B3 and B4, History and Appréciation (6).
- B5 and B6, Harmony (6).
- Philosophy B21-B23 or B24, Logic and Ethics (6).
- Physical Education B3 and B4, Advanced Gymnastics (2).
- B13 and B14, Gymnasium Practice (2).
- B19 and B20, Folk and National Dances.

Not given in 1916-1917.

- Physics C3-D4, Mechanics of Solids and Fluids and Heat (6).
 Physiology B3 and B4, Anatomy and Physiology (6).
 Psychology B1 or B2, Elements of Psychology (3).
 B3 and C4, Principles of Psychology (6).
 Spanish B21-B22, Elementary Course; Modern Prose
 Drama (6).
 Zoology B11-B12, General Zoology; Vertebrate Zoology (6).
 B18, Entomology (3).
 C31-C32, Systematic Vertebrate Zoology (6).

List of Courses†

Open to Seniors and Juniors

- Art B11, History of Art (3).
 B12, History of Art (3).*
 C5-C6, Anatomy; Drawing from Life (6).
 B9 and B10, Art Appreciation (2).
 D7-D8, Figure from Life in Charcoal; Head f
 Life in Oil (6).
 Astronomy B1 and C2, General Astronomy (6).
 C3-D4, Descriptive; Theoretical and Practical (6).
 D6, Astrophysics (3).
 Biblical Literature C5-C6, Old Testament Introduction;
 Testament Introduction (2).
 C7 and C8, The Teachings of Jesus (2).
 C23-C24, Hebrew History and Literature; Early Ch
 tian History and Literature (6).
 C28, Christian Missions (3).
 D25-D26, History of Religions; History of Christ
 ity (6).*
 C31-C32, Hebrew Grammar; Hebrew Readings (6).
 C33, Poetry of the Bible (3).
 D42, Semitic Customs and Culture (3).*
 Botany C23, Plant Physiology (3).
 C24, Sub-tropical Horticulture (2).*
 C25-D26, Mycology; Pathology (6).
 D27-D28, Advanced Botany (6).
 C30, Plant Propagation (3).*
 D31 and D32, Special Mycology (6).
 Chemistry C7-C8, Elementary Quantitative Analysis (6).
 C9 and C10, Systematic Organic Chemistry (6).
 C15 and C16, Agricultural Chemistry (6).
 C11 and C12, Mineral Chemistry (6).

*Not given in 1916-1917.

†In addition to above courses.

- D13, Advanced Organic Chemistry (3).
 D14, Elements of Physiological Chemistry (3).
 D17, Advanced Quantitative Analysis (3).
 D18, Advanced Quantitative Analysis (3).
 D19 and D20, Advanced Chemistry Seminar (2).
 D21 and D22, Physical Chemistry (6).
 D23-D24, Advanced Laboratory Investigation and Research (2-6).
 Constitutional History D9 and D10, Comparative Constitutional History (6).*
 B19, American Colonial Government (3).
 D11 and D12, American Constitutional History (6).*
 Economics and Sociology B3, Principles of Economics (3).*
 C5-C6, Money and Banking; Public Finance (6).
 D7-C8, Corporation Economics; Problems of Labor (6).
 D10, Transportation (3).
 D19 and D20, Applied Sociology (2).
 C25-D26, Poor Relief; Criminology (6).
 D27-C28, Theories of Social Reform; City Problems (6).
 D30, Immigration (3).
 Engineering D13 and D14, Applied Mechanics (6).*
 English D5-D6, Shakespeare's Comedies and Early Tragedies; Shakespeare's Later Tragedies and Romances (6).
 C7-C8, Essayists from Bacon to Arnold; English Novel (6).
 C9-C10, English Poetry of the Seventeenth and Eighteenth Centuries; Poetics; English Poetry of Romantic Periods (6).*
 D12, History of the English Drama to 1462 (3).*
 D15, Shakespeare's English Chronicle and Greek and Latin Plays (3).*
 D16, Shakespeare's Representative Dramas. Seminar (3).*
 C25, Journalism (3).
 C26, Essay (3).*
 D27-C28, Literary Criticism; the Short Story (6).
 C33, Advanced Argumentation (3).*
 C34, Practical Public Speaking (3).
 C41-D42, Anglo-Saxon; Beowulf (6).
 D44, Chaucer (3).*
 C19, English Poetry of Victorian Age (3).
 D20, Present Day English Poetry (3).
 D29 and D30, Composition Seminar (6).

*Not given in 1916-1917.

- French D5-D6, Classic Drama; Prose of the Seventeenth Century (6).
 D7-D8, Literature of the Eighteenth Century; Roman School (6).
 D7' and D8', Conversation and Advanced Composition (4).
- Geology C3, Paleontology (3).
- German C9-C10, Novel of the Nineteenth Century (6).
 C9' and C10', Composition and Conversation (2).
 D5-D6, Lessing, Goethe (6).
 D7-D8, History of German Literature to Lessing; from Lessing to Goethe (6).
 D11-D12, Scientific German; Composition (6).
- Greek C7-D8, Hellenistic Greek; Homer (6).
 D9-D10, Plato; Thucydides (6).
 D11 and D12, Composition and Sight Reading (2).
- History C3-D4, Europe in the Eighteenth Century; Europe in the Nineteenth Century (6).
 D5 and D6, American Social and Political History (6).
 C15-C16, Modern Asiatic History; History of Spain and America (6).
 D9 and D10, Comparative Constitutional History (6).
- Italian B31-B32, Elementary (6).
 C33-D34, Classics (6).
- Latin D9-D10, Cicero; Catullus, Lucretius, Tibullus, Propertius, Ovid and Lucan (6).
 D11-D12, Tacitus; Vergil (6).
 D13 and D14, Composition (2).
- Law B1 and B2, Elementary Law (6).
 C3 and C4, Elementary Law, Pleading, Evidence (6).
 C17 and D18, American Diplomacy and International Law (6).
- Mathematics C17-C18, Advanced Analytic Geometry and Calculus (6).
 C19, Differential and Integral Calculus (3).
 D20, Theory of Equations (3).
 D21 and D22, Higher Analysis (6).
 D24, Differential Equations (3).
 D25 and D26, Analytic Mechanics (6).
 D27 and D28, Projective Geometry (6).
- Music C7 and C8, Composition I (6).
 D9 and D10, Composition II (6).
 C11-C12, Form (6).

*Not given in 1916-1917.

- Philosophy C25-C26, Ancient and Medieval Philosophy; Modern Philosophy (6).
 D27-D28, Introduction to Philosophy; Metaphysics (6).
 C32, Principles of Ethics (3).
 D29-D30, Philosophy of Religions; Modern Philosophical Problems (6).
- Physical Education C5 and C6, Sports (1).
 C15 and C16, Sports (1).
 C7 and C8, Sports (1).
 C17 and C18, Sports (1).
 C21 and C22, Folk and National Dances (1).
 C23 and C24, Aesthetic Dances.
 C25 and C26, Gymnasium Practice.
 C31 and C32, Theory of Athletics (2).
 C33 and C34, Playground Methods (2).
- Physics C3-D4, Mechanics of Solids; Mechanics of Fluids and Heat (6).
 C5 or D5-D6, Sound and Light; Magnetism and Electricity (6).
 C9 and C10, Physical Measurements (3).
- Physiology D5-D6, Histology (6).
 B11 and B12, Public Hygiene.
 B13 and B14, Problems of Heredity and Eugenics.
 D7-D8, Embryology (6).
- Psychology C6, Advanced Psychology (3).
 C7-C8, Educational Psychology; Applications of Psychology (6).
 C11 and C12, History of Education (6).
- Spanish C23-C24, Contemporary Spanish Novel (6).
 C23' and C24', Composition and Commercial Correspondence (2).
 D25-D26, Classic Drama; Prose of the Sixteenth and Seventeenth Centuries (6).
- Zoology C31-C32, Systematic Invertebrate Zoology; Systematic Vertebrate Zoology (6).
 C13-D14, Advanced Zoology; Bionomics (5 or 6).
 D15 or D16, Advanced Zoology (3).
 D19 and D20, Special Entomology (6).
 D33, Comparative Neurology (3).

*Not given in 1916-1917.

Advanced Work

While the College directs its attention primarily to undergraduate work it also desires to extend its opportunities to students seeking the earlier stages of graduate work where it can do so without sacrificing the interests of undergraduates. Only those are admitted who give promise of contributing definite and inspiring influence to the life of the College. Summer residence is therefore required as is deemed necessary to insure mutually helpful relations.

Master's Degree

In a few departments, where the facilities of the College warrant, limited numbers of students, whose undergraduate records show excellence of marked character, are accepted as graduate students in line for the Master's degree. Two years of graduate work, consisting of a major in one department and a minor in the same, or a closely allied department together with a satisfactory thesis, are required. Details as to prerequisites and courses offered may be secured from Professor James A. Lyman, Chairman of the Committee on Graduate Work.

Opportunities in Music and Art

The College is equipped to offer unusual privileges in the departments of Art and of Theoretical and Applied Music. The influence of the College is greatly enriched by the contributions made through these departments to the cultural life of the institution as a whole. In Bridges Hall the great musicians of the world are heard, all students being supplied with admission to these events. Great enlargement of life comes through intimate acquaintance with these arts both in theoretical and applied forms and the College urges all regular students to include them, at least to some degree, in their cultural course.

credit toward the B.A. degree being granted on conditions specified under the detailed description of the courses offered Fine Arts. (90-93)

SPECIAL STUDENTS IN MUSIC

For the present, and subject to the prior demands of regular college students, (1) applicants over twenty-one years of age, (2) students showing special proficiency in music and able to meet the general college entrance requirements will be enrolled as Special Students in music, and when sufficiently advanced will be received as candidates for the Certificate of Proficiency in Music without becoming candidates for the B.A. degree.

MUSIC CERTIFICATES

The College gives a Certificate of Proficiency in Music on the completion of a satisfactory course in this department. The work includes (1) at least 30 hours in the usual musical studies, (2) creditable performance of an entire recital, (3) 23 hours of prescribed work in regular college classes; Language, Literature, Psychology, Physical Education, etc., and (4) six months of practical work in teaching.

Candidates for the B.A. degree may also take the Certificate, but must ordinarily expect to spend five years, in view of the standards of efficiency required, the practice demands and the practical teaching. Detailed information may be had on application.

Departments of Instruction

Order of Arrangement

The announcements of the Departments of Instruction are arranged in three divisions:

- I. Language, Literature, and Fine Arts (71)
 - Classical Languages and Literatures (71)
 - Greek (71) Latin (73)
 - Biblical Literature (74)
 - General Bible Study; Biblical History and Literature (74)
 - English (77)
 - English Language and Rhetoric (77)
 - English Literature (80)
 - Germanic Languages and Literatures; German (83)
 - Romance Languages and Literatures; French (86)
 - Spanish (88) Italian (89)
 - Fine Arts (90); Art (90) Music (92)
- II. Mathematics, Physical and Biological Sciences (94)
 - Mathematics and Astronomy (94)
 - Mathematics (94) Astronomy (98)
 - Physics and Engineering (99)
 - Physics (99) Engineering (100)
 - Chemistry and Geology (102)
 - Chemistry (102) Geology (107)
 - Biological Sciences (108)
 - General Biology, Zoology (108) Physiology (111)
 - Botany (112)
 - Physical Education (114)
- III. History, Social Sciences, and Philosophy (117)
 - History and Constitutional History (117)
 - History (117) Constitutional History (119)
 - Law (120)
 - Economics and Sociology (121)
 - Philosophy (123)
 - Psychology and Education (123) Philosophy (124)

Designation of Courses

The letter preceding the number in the designation of a course indicates in general its grade. Elementary courses, designated by A (as Greek A1) are given in Freshman or Sophomore year; B courses are either those which follow the A courses of earlier years or the more advanced beginning courses; C and D courses are advanced courses given to Juniors and Seniors, D courses being the more difficult. The natural sequence of courses is from A to B, B to C, and C to D, and a student may not enter a C or D course without previous work in the same line.

To pass from an A course to a C course or from a B course to a D course requires a grade of A in the more elementary course.

Seniors may elect an A course only by permission of the Classification Committee, and with a discount of hours.

Odd numbered courses, as A1, come the first semester, even numbered courses, as A2, the second semester.

Any course may be withdrawn if the enrollment is less than ten.

I. Language, Literature and Fine Arts

Classical Languages and Literatures

GREEK

A1 and A2. ELEMENTARY GREEK. (3 hours each.) A course designed for those wishing to begin the study of the language after entering college. Grammar, composition, and reading from the Anabasis of Xenophon, make it possible for those who complete the course with high grade to elect Greek B3 and B4 in their second year. Freshman and Sophomore years, both semesters. T, Th, S, at 7:30. Assistant Professor Robbins.

B3. LYSIAS. (3 hours.) Selected orations (Morgan), with review of grammar and study of Greek life. Freshman and Sophomore years, first semester. M, W, F, at 9:30. Professor Horton.

B4. PLATO. (3 hours.) Apology and Crito with selection from Phaedo (Kitchel). Homer, Odyssey, three or four books grammar. Freshman and Sophomore years, second semester. M, W, F, at 9:30. Professor Norton.

B3' and B4'. GREEK COMPOSITION. (1 hour each.) Required of those who make Greek their major. Freshman and Sophomore years, both semesters. Th, at 8:30. Professor Norton.

C5. AESCHYLUS AND SOPHOCLES. (3 hours.) Prometheus (Harry) and Oedipus the King (White.) Translations of other tragedies read in class; study of Haigh's Greek Theatre essays. Sophomore year, first semester. M, at 2:15; W, at 8:30. Assistant Professor Robbins.

C6. DEMOSTHENES. (3 hours.) Oration on the Crown (Humphreys); outline of Greek literature; sight reading. Sophomore year, second semester. M, at 2:15; W, F, at 8:30. Assistant Professor Robbins.

C7. HELLENISTIC GREEK. (3 hours.) One of the Gospels and one of the Pauline Epistles; informal lectures on ancient manuscripts and the elements of textual criticism. Alternates with Greek C9. Junior and Senior years, first semester. M, at 8:30; W, F, at 2:15. Professor Norton.

D8. HOMER. (3 hours.) Rapid reading of a number of books of the Iliad or Odyssey; the Homeric question. Alternates with Greek D10. Junior and Senior years, second semester. M, at 8:30; W, F, at 2:15. Professor Norton.

D9. PLATO, PHAEDO AND PROTAGORAS. (3 hours.) Outline of Greek Philosophy. Alternates with Greek C7. Junior and Senior years, first semester. (Not given in 1916-1917.)

D10. THUCYDIDES. BOOKS VI AND VII. (3 hours.) Alternates with Greek D8. Junior and Senior years, second semester. (Not given in 1916-1917.)

D11 and D12. PROSE COMPOSITION AND SIGHT READING. (1 hour each.) Required of all making Greek a major. Junior and Senior years, both semesters. (Not given in 1916-1917.)

B13 and B14. GREEK LITERATURE AND LIFE. (3 hours each)

s course is open to those who have no knowledge of the Greek language. It is intended to give, through lectures and translations, some appreciation of the Greek genius and spirit, some knowledge of the form and content of Greek literature. Though ordinarily a year course, it may, by special arrangement with the instructor, be taken for either semester. Sophomore and Junior years, both semesters. T, Th, S, at 10. Professor Norton.

LATIN

A1 and A2. ELEMENTARY LATIN. (3 hours each.) A course intended for those desiring to begin the study of the language on entering college. Grammar, composition, and readings from Caesar's Gallic War. Freshman year, both semesters. T, Th, S, at 7:30. Professor Colcord.

A3 and A4. VERGIL AND CICERO. (3 hours each.) Selections from the Aeneid and the Orations of Cicero. Freshman and Sophomore years, both semesters. M, at 9:30; W, F, at 3:15. Assistant Professor Robbins.

B5. CICERO AND LIVY. (3 hours.) Cicero; (Kelsey) De Oratore and De Amicitia; Livy; (Wescott) Books XXI and XXII, selections; written translations, collateral reading, sight reading. Freshman year, first semester. T, Th, S, at 9:30. Professor Colcord.

B6. HORACE. (3 hours.) (Bennett) Odes, Epodes, Carmen Saeculare; Horatian meters; written translations, collateral reading, sight reading. Freshman year, second semester. T, Th, S, at 9:30. Professor Colcord.

B5' and B6'. LATIN COMPOSITION. (1 hour each.) Required of all making Latin their major. Freshman year, both semesters. T, Th, S, at 11:15. Professor Colcord.

C7. PLINY. (3 hours.) (Westcott) Letters, Tacitus, (Gudean) Agricola and Germania. Collateral readings, history of Roman satire. Sophomore year, first semester. T, Th, S, at 10:30. Professor Colcord.

C8. PLAUTUS. (3 hours.) Captivi, Trinummus, Terence,

Adelphoi, Andria. Collateral readings, study of early Roman comedy and fragments of early Latin. Sophomore year, second semester. T, Th, S, at 8:30. Professor Colcord.

C7' and C8'. LATIN COMPOSITION. (1 hour each.) Connected narrative. Required of all making Latin their major. Prerequisites: Latin B5' and B6'. Sophomore year, both semesters. M, at 1:15. Professor Colcord.

D9. CICERO. (3 hours.) Letters, Tusculan Disputations, Roman satire; Persius, Martial and Juvenal, selections. History of Roman satire. Junior and Senior years, first semester. M, at 3:15; W, F, at 9:30. Professor Colcord.

D10. CATULLUS; LUCRETIUS; TIBULLUS; PROPERTIUS; OVID; LUCAN (Crowell.) (3 hours.) Selections. Topics in outline of Roman literature. Junior and Senior years, second semester. M, at 3:15; W, F, at 9:30. Professor Colcord.

D11. TACITUS. (3 hours.) Histories and Annals, Junius and Senior years, first semester. (Not given in 1916-1917) Professor Colcord.

D12. VERGIL. (3 hours.) Bucolics and Aeneid, Books VI-XII. Ovid. Selections. Christian and Latin Hymns. Junior and Senior years, second semester. (Not given in 1916-1917) Professor Colcord.

D13 and D14. LATIN COMPOSITION. (1 hour each.) Original papers. Required of those making Latin their major. Prerequisites: Latin C7' and C8'. Junior and Senior years, both semesters. Hours to be arranged with the instructor. Professor Colcord.

Biblical Literature

GENERAL BIBLE STUDY

Though courses B3, B5, C5 and C6 are complete in themselves no hours or credits are accepted for graduation unless at least two courses are completed.

A1 and A2. CONTENTS OF THE BIBLE. (1 hour each.) The purpose is to make the student acquainted with the contents

the English Bible. The material, style and purpose of the various facts will be discussed. Freshman year, both semesters. at 1:15. Professor Colcord.

5. THE PRESERVATION AND TRANSMISSION OF THE OLD TESTAMENT. (1 hour.) A general study of the manuscripts, versions and other authorities, together with the history of biblical translations. Sophomore year, first semester. W, at 1:15. Mr. Marriott.

6. THE PRESERVATION AND TRANSMISSION OF THE NEW TESTAMENT. (1 hour.) A general study of the manuscripts, versions and other authorities, together with the history of biblical translations. Sophomore year, second semester. W, at 1:15. Professor Norton.

7. OLD TESTAMENT INTRODUCTION. Historical and Literary Introduction of the Old Testament. (1 hour.) Lectures, reading selected portions of the Old Testament narrative, and the reading of a brief volume of Old Testament Introduction. Junior year, first semester. F, at 2:15. Professor Parker.

8. NEW TESTAMENT INTRODUCTION. (1 hour.) An introduction to the historical study of the New Testament writings, proposing to give briefly the theories of origin of the various books and of the formation of the collection called "The New Testament." Junior year, second semester. F, at 2:15. Mr. Marriott.

9 and C8. THE TEACHINGS OF JESUS. (1 hour each.) The sources of our knowledge of the life of Jesus, the critical problems involved in a study of these sources, and a systematic study of the life and teachings of Jesus in the light of his own and ours. Lectures and text-book. Open to Seniors, and Juniors with permission of instructor. Both semesters. F, at 1:15. Mr. Wark.

BIBLICAL HISTORY AND LITERATURE

B21-B22. ANCIENT ORIENTAL HISTORY AND LITERATURE. (3 hours each.) The beginnings of the earliest civilization, and development in the lands of the Biblical environment, in-

cluding Babylonia, Assyria, Egypt, Persia and Palestine. background for a comprehensive study of Biblical History Literature. Sophomore year, both semesters. M, at 2:15; F, at 8:30. Professor Stearns.

C23. HEBREW HISTORY AND LITERATURE. (3 hours.) From early Semitic times: in history, to the capture of Jerusalem by Titus; in literature, to the completion of the Old Testament canon. Junior and Senior years, first semester. M, at 3:15; W, F, at 9:30. Professor Stearns.

C24. EARLY CHRISTIAN HISTORY AND LITERATURE. (3 hours.) The development during the first four centuries. Junior and Senior years, second semester. M, at 3:15; W, F, at 9:30. Professor Stearns.

C28. CHRISTIAN MISSIONS. (3 hours.) History of efforts to extend the knowledge of biblical literature, with special attention to modern missionary movements. Junior and Senior years, second semester. M, at 1:15; W, F, at 7:30. Professor Stearns.

D25. HISTORY OF RELIGIONS. (3 hours.) Development of the great religious systems of the world, with such ethical analysis as may be necessary for comparisons with biblical values. The object is to widen historical information, and emphasize the place the Bible holds in religion. Junior and Senior years, first semester. (Not given in 1916-1917.) Professor Stearns.

D26. HISTORY OF CHRISTIANITY. (3 hours.) The historical development of Christianity into a world religion. Lecture course with required readings. Junior and Senior years, second semester. (Not given in 1916-1917.) Professor Stearns.

C31. HEBREW GRAMMAR. (3 hours.) A course for beginners. Exercises in reading and writing Hebrew. Prerequisite: A B course in either Greek, Latin or German. Junior and Senior years, first semester. To be given if elected by a sufficient number. Hours to be arranged with the instructor. Professor Stearns.

32. HEBREW READINGS. (3 hours.) Translations of representative selections from Old Testament Literature, to enable student to read the Hebrew Bible intelligently. Prerequisite: Biblical Literature, C31. Junior and Senior years, second semester. Hours to be arranged with instructor. Professor Stearns.

33. THE POETRY OF THE BIBLE. (3 hours.) With special study of portions of Isaiah, The Psalms, and Job. Junior and Senior years, first semester. M, at 1:15; W, F, at 7:30. Professor Stearns.

42. SEMITIC INSTITUTIONS AND CULTURE. (3 hours.) Specialized studies in Semitic customs, arts and letters, more or less connected with Old Testament history. Prerequisite: C2 or C23. Junior and Senior years, second semester. (Not given in 1916-1917.) Professor Stearns.

English

ENGLISH LANGUAGE AND RHETORIC

Students who elect English Language as a major are required to offer English C41, D42 and D44; and, from the Department of English Literature, English B3 or B3a and B4. The requirements for the major in English Literature are stated under that Department. Advice as to other work should be sought from the head of the Department. Students will be admitted to C and D courses in this Department who have done satisfactory work in B and C courses in the Department of English Literature.

A21 and A22. COMPOSITION. (2 hours each.) A study of the elements of effective prose composition. Lectures and analysis of illustrative specimens selected from masters of prose to assist the student in securing a knowledge of the principles of good writing. These principles applied constantly in the writing. Individual conferences with the instructor. An effort is made to adapt the work to the degree of proficiency of the student. To this end the better students are registered

in sections designated as A21a and A22a, the others in A21b and A22b. Students deficient in English A21 and A22 must be required to take English B24. Required in all courses; Freshman year, eight divisions, two hours a week, both semesters. I. W, F, at 7:30; II. Th, S, at 7:30; III. W, F, at 9:30; IV. S, at 9:30; V. M, W, at 11:15; VI. T, Th, at 11:15; VII. W, F, at 1:15; VIII. W, F, at 2:15. Assistant Professor Brainerd, Mr. Edwards and Mr. Perkins.

A35 and A36. ELEMENTARY PUBLIC ADDRESS. (2 hours each.) An elementary course designed to acquaint the student with his own needs. Frequent practice given in simple reading, declamation, and extempore speaking. The aim is to make the mind and body responsive to thought and feeling. Individual deficiencies pointed out, and modes of correction prescribed. Freshman year, both semesters. I. M, at 8:30; W, at 2:15. II. M, at 2:15; W, at 8:30. Mr. Edwards.

B23. COMPOSITION. (3 hours.) Introductory study of the short-story, the essay, and literary criticism. Frequent original work. Conferences. Open only to those who have made B grade or better in English A21a and A22a. Sophomore first semester. M, at 3:15; W, F, at 9:30. Professor Francis and Mr. Perkins.

B24a and B24b. COMPOSITION. (2 hours each.) A course of continuation of English A21 and A22. For those who desire further study of composition. May be required of any students deficient in English. Sophomore year, both semesters. T, Th, at 11:15. Mr. Edwards.

C25. JOURNALISM. (3 hours.) A study of the forms and methods of newspaper writing. Special consideration of reporting, the news story, the special article, the editorial, news style, editing. Junior and Senior years, first semester. M, at 7:30; W, F, at 1:15. Mr. Edwards.

C26. ESSAY. (3 hours.) Analytical and constructive study of the essay; frequent original work. Special attention to form and clearness of expression. Open to Sophomores

tain an A grade in English B23. Junior and Senior years, second semester. (Not given in 1916-1917.)

D27. LITERARY CRITICISM. (3 hours.) A study of the practice of literary criticism in the nineteenth century for the purpose of formulating a thorough critical background for the study of literature. The theories and tenets of the various schools are studied and their bearings pointed out. Lectures. Frequent practice in critical writing. Junior and Senior years, second semester. T, Th, S, at 8:30. Professor Frampton.

D28. THE SHORT-STORY. (3 hours.) A study of the formal technic of the short-story. Study of American short-story writers. Frequent original work. Open to Sophomores who have had English B23. Junior and Senior years, second semester. M, at 3:15; W, F, at 9:30. Professor Frampton.

D29 and D30. COMPOSITION SEMINAR. (3 hours each.) Practice of various forms of creative work for a limited number of advanced students. Students must obtain the written consent of the teacher prior to registration. Junior and Senior years, both semesters. T, at 3:15 and 4:15; F, at 8:30. Professor Frampton.

B31. ARGUMENTATION. (3 hours.) A study of the elements of argumentation, the analysis of propositions and evidence and drawing of briefs. Practice debates. Sophomore year, first semester. T, Th, S, at 8:30. Mr. Edwards.

B32. PUBLIC ADDRESS. (3 hours.) A study of the forms of public address. The ends of speech such as clearness, action, and belief are taken up to determine selection of material and method of presentation. The aim is to give the student reasonable control of himself before an audience while effectively presenting clear and convincing thought. Lectures. Frequent speaking before the class. Prerequisite to English C34. Sophomore year, second semester. T, Th, S, at 8:30. Mr. Edwards.

C33. ADVANCED ARGUMENTATION. (3 hours.) A study of the principles of argumentation, the tests of evidence, briefing and the structure of the forensic. Of especial value to those looking forward to the law as a profession. (Not given in

1916-1917.) Junior and Senior years, second semester. Professor Frampton.

C34. PRACTICAL PUBLIC SPEAKING. (3 hours.) The tempore method is used to train in the rapid formulation of thought and its attractive and effective presentation. Current topics and questions of general interest are assigned in advance as material for the class discussion, but the choice of language is left largely to the moment of speaking. Other topics are assigned at the time of speaking. Prerequisite: English C41. Junior and Senior years, second semester. M, W, F, at 11. Mr. Edwards.

C41. ANGLO-SAXON. (3 hours.) A study of Anglo-Saxon grammar and the selections in Bright's "Reader." Required of students whose major is English. Given in alternate years. Junior and Senior years, first semester. T, Th, S, at 11. Professor Frampton.

D42. BEOWULF. (3 hours.) A study of the text of Beowulf and of Anglo-Saxon versification. Lectures. Required of those whose major is English Language. Prerequisite: English C41. Given in alternate years. Junior and Senior years, second semester. T, Th, S, at 11.15. Professor Frampton.

D44. CHAUCER. (3 hours.) A linguistic and literary study of Chaucer. Lectures. Thesis. It is desirable, though not necessary, that those who elect this course shall have completed English C41 and English B3a. Given in alternate years. Required of those whose major is English Language. Junior and Senior years, second semester. (Not given in 1916-1917.) Professor Frampton.

ENGLISH LITERATURE

Students who make English Literature their Major subject are required to take from the Department of English Language courses C41 and C42, and from the Department of English Literature courses B3 and B4, C7 or C8, two courses from C10, C19 and D20, and two courses from D5, D6, D15 and D16. They should consult the head of the department regarding

choice of courses and other work. The requirements for the major in English Language are given under that department. Courses in English Literature A1 and A2 are provided primarily for Freshmen who enter with less than four years of preparatory literature. Freshmen with a knowledge of English history and with four years of preparatory literature, may register in courses B3, B3a and B4.

A1 and A2. NINETEENTH CENTURY ENGLISH AND AMERICAN LITERATURE. (3 hours each.) Characteristic literary forms and writers of the century. Special attention to those prose productions reappearing in other departments, as history, oratory, and argument. Intensive study of selected masterpieces. Freshman year, both semesters. I. T, Th, S, at 8:30; II. T, Th, S, at 9:30. Professor Stearns.

B3 and B4. DEVELOPMENT OF ENGLISH LITERATURE. (3 hours each.) A careful study of the historical and literary evolution of English literature from its beginning to the middle of the nineteenth century. Lectures, class discussions, and individual papers. A working knowledge of English history is assumed. Prerequisites: English A1 and A2 or equivalent. Sophomore and Freshman years, both semesters. I. T, Th, S, at 8:30; II. T, Th, S, at 11:15. Professor Spalding.

B3a. MEDIEVAL LITERATURE. (3 hours.) A course in comparative literature in translation with special attention to the relations between England and the Continent. Recommended to those who major in English Language, as preparation for English D44. Open to those who have a knowledge of English history. Sophomore year, first semester. T, Th, S, at 8:30. Professor Frampton.

B13 and B14. GREEK LITERATURE AND LIFE. (3 hours each.) The same as Greek B13 and B14. In exceptional cases this course may be substituted for B3 and B4. Sophomore and Junior years, both semesters. T, Th, S, at 9:30. Professor Norton.

One course in English prose, either C7 or C8, is required of all whose major is English Literature.

C7. ENGLISH ESSAYISTS FROM BACON TO ARNOLD. (3 hours.) Historical development with analytical and interpretative study of selected essays. Junior and Senior years, first semester. M, at 9:30; W, F, at 3:15. Professor Spalding.

C8. ENGLISH NOVEL. (3 hours.) Careful reading of twelve to fifteen classic novels, with interpretative and critical study of a few. This course presupposes a fair acquaintance with Victorian fiction. Junior and Senior years, second semester. M, at 9:30; W, F, at 3:15. Professor Spalding.

Two courses in English poetry are required of those who major in English Literature. Under exceptional conditions C18 and C19 may be given as D courses.

C9. ENGLISH POETRY OF THE SEVENTEENTH AND EIGHTEENTH CENTURIES; POETICS. (3 hours.) Study of the scientific and artistic structure of English verse. General survey of period. Intensive study of Milton or Pope. Junior and Senior years, alternate years, first semester. (Not given in 1916-1917.) Professor Spalding.

C10. ENGLISH POETRY OF ROMANTIC PERIOD. (3 hours.) Comparative study of contributions of poetry of nature and society. Special study of Wordsworth, and other selected writers of this period. Junior and Senior years, alternate years, second semester. (Not given in 1916-1917.) Professor Spalding.

C19. ENGLISH POETRY OF VICTORIAN AGE. (3 hours.) Poetical trend and achievements of the century. Special study of Browning or Tennyson. Junior and Senior years, alternate years, first semester. T, Th, S, at 9:30. Professor Spalding.

D20. PRESENT-DAY ENGLISH POETRY. (3 hours.) Seminar study of recent poets most sensibly shaping and expressing contemporary poetical philosophy and usage. Open to students who have taken the equivalent of two courses in poetry and have the written consent of the instructor. Junior and Senior years, alternate years, second semester. T, Th, S, at 9:30. Professor Spalding.

D5. SHAKESPEARE'S COMEDIES AND EARLY TRAGEDIES. (3 hours.) Special attention to Shakespeare's relations to the

natic influences of his period. Reading of all comedies. Study of two selected plays representative of his early material methods. Junior and Senior years, first semester. M, at 5; W, F, at 8:30. Professor Spalding.

D6. SHAKESPEARE'S LATER TRAGEDIES AND ROMANCES. (3 hours.) Analytical and interpretative study of representative dramas from each group. Individual theses upon phases of Shakespeare's mature genius and dramatic art. Junior and Senior years, second semester. M, at 2:15; W, F, at 8:30. Professor Spalding.

D15. SHAKESPEARE'S ENGLISH CHRONICLE AND GREEK AND LATIN PLAYS. (3 hours.) Consideration of historical material and its relation to Elizabethan drama. Junior and Senior years, first semester. Alternates with English D5. (Not given in 1916-1917.) Professor Spalding.

D16. SHAKESPEARE'S REPRESENTATIVE DRAMAS. Seminar course in Shakespearean criticism, editing and stage presentation. Prerequisite English D5 or D15 and D6. Senior year, second semester. Alternates with English D6. (Not given in 1916-1917.) Professor Spalding.

D12. HISTORY OF THE ENGLISH DRAMA FROM 1550 TO 1642. (3 hours.) A study of the development of the English drama from 1550 to the closing of the theatres by the Puritans with special reference to Shakespeare's contemporaries. Complementary to English D5 and D6. Junior and Senior years, second semester. (Not given in 1916-1917.) Professor Frampton.

Germanic Languages and Literatures

GERMAN

A1 and A2. ELEMENTARY COURSE. (3 hours each.) Intended especially for Freshmen who offer no modern language. By the constant use of the language in the class-room the student is stimulated from the outset to think in German. Thorough drill in grammar and composition throughout the year; memorizing of poetic and also prose selections; reading of a con-

siderable body of simpler stories and poems. Freshman y both semesters. I. M, at 3:15; W, F, at 9:30; II. T, Th, at 8:30. Assistant Professor Matlock.

A13 and B14. INTERMEDIATE COURSE. (3 hours each.) Grammar, composition, reading of prose and poetry, memorizing the latter. Primarily for those entering with only one of recommended German. May be required of others show special need of the type of drill given. Freshman Sophomore years, both semesters. I. M, at 8:30; W, F, at 2:15; II. T, Th, S, at 9:30. Professor Bissell.

B3. PROSE NARRATIVE AND DRAMA. (3 hours.) Reading more advanced short stories or a novel, and a drama. Grammatical analysis, short essays in German on assigned to sight reading, discussion of text in German, the student expected to grow in ability to use the language freely. prerequisites: German A1 and A2 or two years of elementary German. Freshman and Sophomore years, three divisions, semester. I. M, at 1:15; W, F, at 7:30; II. M, at 2:15; F, at 8:30. Assistant Professor Matlock.

B4. SCHILLER. (3 hours.) Reading of selected ballads and other poems of Schiller, *Lied von der Glocke*, and *Maria Stuart*. Prerequisite: German B3. Freshman and Sophomore years, two divisions, second semester. I. M, at 1:15; W, F, at 7:30; II. M, at 2:15; W, F, at 8:30. Assistant Professor Matlock.

B1' and B2'. GERMAN COMPOSITION. (1 hour each.) Simple prose narrative and conversation. Review of fundamental grammar. May be required of those deficient in German. Freshman and Sophomore years, both semesters. T, at 11:15. Associate Professor Churchill.

B3' and B4'. GERMAN COMPOSITION. (1 hour each.) Advanced narrative prose, based on Wiehr's Composition. For students of good standing. Freshman and Sophomore years, both semesters. Th, at 11:15. Associate Professor Churchill.

C9. GERMAN NOVEL OF THE NINETEENTH CENTURY. (3 hours.) Lectures on the development of the German Novel.

readings from works of Haupt, Eichendorff, Freytag, Erbach. Prerequisites: German B3 and B4 or equivalent. Sophomore and Junior years, first semester. T, Th, S, at 7:30. Professor Bissell.

10. GERMAN NOVEL OF THE NINETEENTH CENTURY. (Continued.) (3 hours.) Lectures continued; readings from the works of Ludwig, Spielhagen, Keller, Storm, Frenssen. Prerequisite: German C9. Sophomore and Junior years, second semester. T, Th, S, at 7:30. Professor Bissell.

C9' and C10'. GERMAN COMPOSITION AND CONVERSATION. (1 hour each.) Required of those making German their major. Prerequisites: German B3 and B4 or equivalent, and German B4'. Sophomore and Junior years, both semesters. F, 9:30. Professor Bissell.

19. ADVANCED GERMAN PROSE. (3 hours.) Reading of carefully selected addresses by Emperor William, Carl Schurz, von Moltke, Bismarck and other men of note, and other selections which offer a rich and varied vocabulary in the general fields of political science, history, criticism and philosophy and science. Prerequisites: German B3 and B4, or equivalent. Sophomore and Junior years, first semester. T, Th, S, at 9:30. Assistant Professor Matlock.

20. ADVANCED GERMAN PROSE. (3 hours.) A continuation of German C19. Prerequisite: German C19. Sophomore and Junior years, second semester. T, Th, S, at 9:30. Assistant Professor Matlock.

25. LESSING. (3 hours.) Lectures on Lessing's life, works and influence. Reading of his principal dramas and portions of Laocoon and other prose works. Junior and Senior years, first semester. M, W, F, at 11:15. Professor Bissell.

26. GOETHE. (3 hours.) Lectures on Goethe's life, works and place in literature, relation to Schiller. Reading of Faust, Part I, and at least two other works. Prerequisite: German C19. Junior and Senior years, second semester. M, W, F, at 11:15. Professor Bissell.

D7. OUTLINE COURSE IN THE HISTORY OF GERMAN LITERATURE AND LANGUAGE TO THE AGE OF LESSING. (3 hours.) Lectures supplemented by assigned readings from the great medieval epics. Prerequisites: German C9 and C10 or equivalent. Junior and Senior years, first semester. (Not given in 1916-1917.) Professor Bissell and Assistant Professor Matlock.

D8. CONTINUATION OF D7 FROM LESSING TO THE DEATH OF GOETHE. (3 hours.) Reading of representative works of Lessing, Schiller and Goethe. Prerequisite: German D7. Junior and Senior years, second semester. (Not given in 1916-1917.) Professor Bissell and Assistant Professor Matlock.

D11. SCIENTIFIC GERMAN. (3 hours.) Based on Hodder's Course and Brandt and Day's Reader. Assignments from the works of scientific writers. Intended primarily for those preparing to do graduate work leading to the degree of Doctor of Philosophy. Prerequisites: German C9 and C10 or equivalent. Junior and Senior years, second semester. T, Th, S, at 8:30. Professor Bissell.

D12. GERMAN COMPOSITION. (3 hours.) Advanced course required of all who desire the recommendation of the Department as teachers. Prerequisites: Two years of college German, including German C9' and C10'. Junior and Senior years, first semester. W, at 8:30 and 9:30; F, at 8:30. Professor Bissell.

Romance Languages and Literatures

FRENCH

A1. ELEMENTARY COURSE. (3 hours.) Aldrich and Foster's Elementary French. Reading of easy prose and poetry; grammatical analysis, composition and dictation. Freshman and Sophomore years, three divisions, first semester. I. M, at 1:15; W, F, at 7:30. II. M, at 3:15; W, F, at 9:30. III. T, Th, at 11:15. Associate Professor Jones and Assistant Professor Pecker.

A2. MODERN PROSE AND DRAMA. (3 hours.) Continuation

French A1. Selected readings from Daudet, Coppée, Loti, Zola and others. Grammatical reviews, composition and diction; sight reading. Freshman and Sophomore years, three divisions, second semester. I. M, at 1:15; W, F, at 7:30. II. M, at 3:15; W, F, at 9:30. III. T, Th, S, at 11:15. Associate Professor Jones and Assistant Professor Pecker.

B3. FRENCH NOVEL OF THE NINETEENTH CENTURY. (3 hours.) Reading of selected masterpieces of De Vigny, Balzac, Sand, Zola and others; lectures, essays and composition. Prerequisite: French A2 or equivalent. Freshman and Sophomore years, first semester. I. T, Th, S, at 7:30; II. M, at 2:15; W, F, at 8:30. Assistant Professor Pecker.

C4. FRENCH NOVEL OF THE NINETEENTH CENTURY. (3 hours.) Continuation of French B3. Prerequisite: French B3 or equivalent. Freshman and Sophomore years, second semester. I. T, Th, S, at 7:30; II. M, at 2:15; W, F, at 8:30. Assistant Professor Pecker.

B3'. GRAMMATICAL ANALYSIS. (2 hours.) A course in French composition required of those making Romance Languages their major. Prerequisite: French A1 and A2. Freshman and Sophomore years, first semester. M, W, at 11:15. Assistant Professor Pecker.

C4'. COMPOSITION AND DICTION. (2 hours.) Required of those making Romance Languages their major. Prerequisite: French B3'. Freshman and Sophomore years, second semester. M, W, at 11:15. Assistant Professor Pecker.

D5. CLASSIC DRAMA. (3 hours.) Reading of Corneille's *Cid*, Molière's *Tartuffe*, Racine's *Athalie*; essays and sight reading continued; lectures upon the literary history of the period. This course, and all to follow, are conducted entirely in French. Alternates with French D7. Prerequisites: French B3 and C4. Junior and Senior years, first semester. M, at 1:15; W, F, at 7:30. Associate Professor Jones.

D6. FRENCH PROSE OF THE SEVENTEENTH CENTURY. (3 hours.) Selections from Bossuet, Descartes, Pascal, La Bruyère, Mme. de Sévigné, etc.; essays and lectures upon the history of French

literature, continued. Alternates with French D8. Prerequisites: French B3 and C4. Junior and Senior years, second semester. M, at 1:15; W, F, at 7:30. Associate Professor Jones.

D7. LITERATURE OF THE EIGHTEENTH CENTURY. (3 hours.) Selections from Montesquieu, Voltaire, Rousseau, Beaumarchais etc. Essays and sight reading; lectures upon the literary history of the period. Alternates with French D5. Prerequisites: French B3 and C4. Junior and Senior years, first semester. (Not given in 1916-1917.) Associate Professor Jones.

D8. ROMANTIC SCHOOL. (3 hours.) Readings from Hugo, Alfred de Musset, Lamartine, etc.; significance and influence of the Romantic movement; essays and lectures upon the history of French literature continued. Prerequisites: French B3 and C4. Alternates with French D6. Junior and Senior years, second semester. (Not given in 1916-1917.) Associate Professor Jones.

D7' and D8'. CONVERSATION, PHONETICS AND ADVANCED COMPOSITION. (2 hours each.) An advanced conversational course required of those specializing in French, and must be accompanied by a D course in literature. Junior and Senior years, both semesters. T, at 1:15 and 2:15. Assistant Professor Pecker.

SPANISH

B21. ELEMENTARY COURSE. (3 hours.) Hills & Ford's Spanish grammar. Padre Isla's *Gil Blas de Santillana*. Conversation, composition and dictation. Sophomore and Junior years, first semester. T, Th, S, at 8:30. Assistant Professor Pecker.

B22. MODERN PROSE AND DRAMA. (3 hours.) Alarcón's *Capitán Veneno* or *El Sombrero de tres Picos*; Echegaray, *La locura ó santidad*; Bretón; *Quién es ella?* Becquer's *Tales and Poems*. Conversation and dictation; Umphrey's *Spanish Prose Composition*. Sophomore and Junior years, second semester. T, Th, S, at 8:30. Assistant Professor Pecker.

C23. CONTEMPORARY SPANISH NOVEL. (3 hours.) Selections from the works of Galdós, Valdés, Blasco Ibáñez and others. Essays and résumés in Spanish; conversation based upon

lla's Spanish Daily Life. Prerequisites: Spanish B21 and or equivalent. Sophomore and Junior years, first semester. T, Th, S, at 9:30. Associate Professor Jones.

24. CONTEMPORARY SPANISH NOVEL. (3 hours.) Continuation of C2. Reading from Valera, Pereda, Pardo Bazan and others. Lectures in Spanish; essays and résumés. Sophomore and Junior years, second semester. T, Th, S, at 9:30. Associate Professor Jones.

23' and C24'. COMPOSITION AND COMMERCIAL CORRESPONDENCE. (1 hour each.) Prerequisites: Spanish B21 and B22. Required of those specializing in Spanish. A course in advanced composition and epistolary usages. Sophomore and Junior years, first semesters. F, at 2:15. Associate Professor Jones.

25. THE CLASSIC DRAMA. (3 hours.) Selections from Lope de Vega, Tirso de Molina, Calderón de la Barca. Lectures upon the history of Spanish literature. This course, as well as D26, conducted entirely in Spanish. Prerequisite: Spanish C24 or equivalent. Junior and Senior years. M, W, F, at 11:15. Associate Professor Jones.

26. SPANISH PROSE OF THE SIXTEENTH AND SEVENTEENTH CENTURIES. (3 hours.) Readings from Cervantes; *El Quijote* and the *Novelas Ejemplares*; the picaresque novel; *Lazarillo de Tormes*. Lectures continued. Prerequisite: Spanish C24 or equivalent. Junior and Senior years, second semester. M, W, F, at 11:15. Associate Professor Jones.

ITALIAN

331. ELEMENTARY COURSE. (3 hours.) Young's Italian Grammar. De Amicis' *Cuore*; Goldoni's *La Locandiera*. Drill in pronunciation; composition and dictation. Junior and Senior years, first semester. M, at 9:30; W, F, at 3:15. Associate Professor Jones.

332. ELEMENTARY COURSE. (3 hours.) Continuation of Italian 331. Manzoni's *I promessi Sposi*; Silvio Pellico's *Le mie prigioni*; short stories and plays from modern authors. Grand-son's Italian Prose Composition; conversation and dictation.

Junior and Senior years, second semester. M, at 9:30; W at 3:15. Associate Professor Jones.

C33. ITALIAN CLASSICS. (3 hours.) Boccaccio, Petrarch, Ariosto and Tasso. Lectures upon the history of Italian literature. Prerequisite: Italian B32 or equivalent. Junior and Senior years, first semester. (Not given in 1916-1917.) Associate Professor Jones.

D34. CLASSICS. (Continued.) (3 hours.) Dante's *Inferno* with selections from the *Purgatorio* and *Paradiso*. Flaming study of the *Divine Comedy*. Essays and lectures continued. Prerequisite: Italian B32 or equivalent. Junior and Senior years, second semester. (Not given in 1916-1917.) Associate Professor Jones.

Fine Arts

ART

Credit is given toward graduation for courses in art, provided the work is sufficiently advanced and the requirements are met as to the readings and attendance on lectures dealing with the history and theory of art. Three hours of credit involve two two-hour lessons in class and five hours of practice per week. Practice work is done in the studio, save as from time to time work outside is arranged by the instructor, and all practice work is criticized by the instructor. Attendance on lectures is substituted at times for one of the weekly practice hours.

The following description of courses is suggestive only, the work varies slightly from year to year, as the needs of individual classes demand.

All courses except Art B11 and B12 are given by Assistant Professor Jenkins, the head of the Department.

A1. (3 hours.) Drawing from casts and objects; painting in water colors over charcoal; color problems in hues, tints, intensities and values; painting still life from objects. Freshman year, first semester.

A2. (3 hours.) Design—pure and applied; landscape and

vers from nature in water color and pastels. Freshman year, second semester.

B3. (3 hours) Drawing from cast—full-length figure; applied perspective; wash painting in water colors for architectural design. Sophomore year, first semester.

B4. (3 hours.) Designing book covers and commercial advertising; pen and ink rendering. Sophomore year, second semester.

B5. (3 hours.) Anatomy of head; drawing head from life in charcoal; head and figure in pen and ink; painting from life in oil colors. Junior year, first semester.

B6. (3 hours.) Anatomy of full-length figure; particular attention given to construction rather than finished drawings. Painting in oil colors. Junior year, second semester.

B7. (3 hours.) Drawing and painting; portrait and figure from life; landscape from nature. Senior year, first semester.

B8. (3 hours.) Drawing and painting; portrait and figure; waters and landscape. Senior year, second semester.

B9 and B10. ART APPRECIATION. (1 hour each.) Lectures and assigned readings. The course covers the critical study of masterpieces, home decoration, church adornment and art in general. The terminology and technique of all lines of art are fully discussed. Credit is given only when accompanied by Art A1 and B4, or C5 and C6, or D7 and D8, or by a special course in Art involving one two-hour lesson and four hours of practice work per week. For this special course two hours additional credit per semester are given. Prerequisites: Art A1 and A2. Sophomore, Junior and Senior years, both semesters. M. at 11:15. Courses in Graphics, Machine Drawing, Descriptive Geometry, and Perspective are described under the Department of Engineering.

B11. HISTORY OF ART. (3 hours.) Outline study of Greek art. An attempt will be made to trace the historic development of the various forms of Greek art through its chief periods. Junior and Senior years, first semester. M, T, Th, at 4:15. Professor Norton.

B12. HISTORY OF ART. (3 hours.) Outline study of Gothic and renaissance architecture, sculpture and painting. Junior and Senior years, second semester. (Not given in 1916-1917) Professor Spalding.

MUSIC

HISTORY AND THEORY OF MUSIC

Courses in the history and theory of music are granted credit on the same basis as other college studies, and proficient students may major in either theoretical or applied music under conditions arranged in consultation with the head of the department.

A1 and A2. ELEMENTARY MUSIC AND EAR TRAINING. (3 hours each.) A course dealing with the rudiments of music, including notations, rhythm, intervals, scales and definitions in terms. Extended work in ear-training, aiming to teach discriminative listening, is conducted by an assistant. A text is used. Three recitations to count as two hours. Freshman and Sophomore years, two divisions, both semesters. I. T, Th, S, 7:30; II. M, at 9:30; W, F, at 3:15. Miss Pasmore.

B3 and B4. MUSICAL HISTORY AND APPRECIATION. (3 hours each.) Lectures are given on the development of music from its earliest stages. The history of church music, of opera, and oratorio; biographical sketches of famous composers, with description of their principal works. Recitals, to aid in appreciation, are given bi-weekly. A text-book is used. Sophomore year, both semesters. M, at 8:30; W, F, at 2:15. Miss West.

B5 and B6. HARMONY. (3 hours each.) A study of intervals, scales, chord construction and their relation. An abundance of excerpts are examined. Especial emphasis is laid upon the harmonization of melodies, as well as practical application to the key-board of the principles involved. Creative work is encouraged from the beginning. The new text by Carolyn Alchin is used. Prerequisite: Music A1 and A2, and an elementary knowledge of the pianoforte. Sophomore and Junior

rs, both semesters. I. T, Th, S, at 11:15; II. M, at 3:15; F, at 9:30. Mr. Evans.

C7 and C8. COMPOSITION I. (3 hours each.) The first semester will be devoted to a study of Simple Counterpoint of species in two, three and four voices. The aim is to develop technique in smooth voice leading. Creative work in the simpler forms of Free Composition is undertaken in the second semester. Prerequisite, Music B5 and B6. Junior and Senior years, both semesters. T, Th, S, at 9:30. Assistant Professor Hartley.

D9 and D10. COMPOSITION II. (3 hours each.) Original work leading up to the Sonata form constitutes the basis of this course. Prerequisite: Music C7 and C8. Junior and Senior years, both semesters. M, W, F, at 11:15. Assistant Professor Hartley.

C11. FORM. (3 hours.) The essentials of Form in musical composition: sentence, phrase, motif, rhythm and modulation. Synthetical study of simple forms. Analysis of Canon, Fugue, Sonata, etc., and study of chamber music. A text book is used. Prerequisites: Music B5 and B6. Junior and Senior years, first semester. (Not given in 1916-1917.)

C12. MUSICAL APPRECIATION. (3 hours.) A course covering musical appreciation may be given the second semester if there is demand. No prerequisites. (Not given in 1916-1917.)

APPLIED MUSIC

As previously stated, proficient students may major in either theoretical or applied music, under conditions arranged in consultation with the head of the department.

The student will be enrolled for credit, only upon written statement from the head of the department concerned that sufficient ability and advancement have been shown in the Proficiency Tests (listed below) to warrant such credit. The work must be accompanied or preceded by the theoretical courses A1, A2, and B5, B6. Two half hour lessons weekly are required as the minimum for which credit is allowed. Under these con-

ditions the applied work is rated as two hours for each semester. Not more than ten such hours may be counted toward the degree.

PROFICIENCY TESTS

- (1) Simple major and minor scales at moderate tempo.
- (2) Sight reading—hymn tune or second grade piece.
- (3) Memory test:

VOICE—(Consult head of this department.)

VIOLIN, VIOLONCELLO. VIOLA—One of the following compositions: Vision, or Souvenir or Serenade by Drdla. Serenade Canzonetta by D'Ambrosio. Minuet and trio in D by Mozart.

PIANO—One of Bach's "Little Preludes." This may be played from score if the student presents also a memorized composition of not lower than third grade difficulty.

ORGAN—Same as piano with the addition of two of Bach's "Two-Part Inventions" or one "Three-Part Invention." This may be played from score.

All test work will be considered in estimating the student's sense of rhythm, phrasing, intonation, etc.

II. Mathematics, Physical and Biological Sciences

Mathematics and Astronomy

MATHEMATICS

The courses in mathematics designated A1 and A2, A3 and A4, A5 and A6, A9 and A10, and B7 and B8 are intended primarily for Freshmen. Students who enter with credit for three and a half or four units of commended work in mathematics, including solid geometry and trigonometry, may take Mathematics A7 and B8, or B13 and B14. Mathematics B7 and B8 are required of students in engineering. Students who wish to do further work in mathematics, but who have not sufficient preparation for the B courses, may take Mathematics A1 and A2.

and B4, or A9 and A10, according to their preparation and . Mathematics A5 and A6 are intended primarily for those who do not expect to take further work in the subject.

1. SOLID GEOMETRY. (3 hours.) The geometry of space with original exercises and problems. Freshman year, first semester. T, Th, S, at 11:15. Assistant Professor Belcher.

2. PLANE TRIGONOMETRY. (3 hours.) Essential principles and applications to problems in surveying. Freshman year, second semester. T, Th, S, at 11:15. Assistant Professor Belcher.

3-B4. ALGEBRA. (3 hours each.) Review of fundamental principles and operations, quadratic equations, ratio, proportion, variation, commensurable, incommensurable, and imaginary numbers, progressions, permutations and combinations, binomial theorem, series, undetermined coefficients, logarithms, determinant theory of equations. Freshman year, both semesters. M, at 2:15; W, F, at 9:30. Assistant Professor Belcher. Associate Professor Russell.

5 and A6. ELEMENTARY ANALYSIS. (3 hours each.) A critical and historical study of some of the most interesting principles of mathematical analysis. Freshman year, two divisions, both semesters. I. M, at 2:15; W, F, at 8:30; II. M, at 2:15; W, F, at 9:30. Assistant Professor Berry.

9. ALGEBRA. (3 hours.) A semester course in second year algebra, designed for those who have studied algebra only a year. Freshman year, two divisions, first semester. I. M, at 2:15; W, F, at 8:30; II. M, at 8:30; W, F, at 2:15. Associate Professor Russell.

10. TRIGONOMETRY. (3 hours.) The elements of plane trigonometry with practical problems. Freshman year, two divisions, second semester. I. M, at 2:15; W, F, at 8:30; II. M, at 2:15; W, F, at 2:15. Associate Professor Russell.

15. SPHERICAL TRIGONOMETRY. (2 hours.) A general course in the essentials of spherical trigonometry, with applications in geodesy and astronomy. Prerequisite: Plane trigonometry. Sophomore and Junior years, first semester. T, Th, at 11:15. Associate Professor Russell.

B7. ANALYTIC GEOMETRY. (3 hours.) A course in analytic geometry designed especially for students of physics and engineering. Freshman and Sophomore years, first semester. Assistant Professor Belcher.

B8. ANALYTIC GEOMETRY AND CALCULUS. (3 hours.) An introduction to differential calculus with applications to analytic geometry and mechanics. Designed to follow Mathematics B7. Freshman and Sophomore years, second semester. Assistant Professor Belcher.

For the year 1916-1917 B7 and B8 may be combined with B14.

B13. ANALYTIC GEOMETRY AND CALCULUS. (3 hours.) An elementary course in the principles of co-ordinate geometry and the introduction to the differential calculus. Designed to follow Mathematics A1 and A2, A3 and B4, or A9 and A10. Sophomore year, first semester. T, Th, S, at 9:30. Associate Professor Russell.

B14. DIFFERENTIAL AND INTEGRAL CALCULUS. (3 hours.) First course in the differential and integral calculus with applications chiefly to analytic geometry. Designed to follow Mathematics B13. Sophomore year, second semester. T, Th, S, at 9:30. Associate Professor Russell.

C17-C18. ADVANCED ANALYTIC GEOMETRY AND CALCULUS. (3 hours each.) Fundamental processes in integration with applications to analytic geometry and mechanics; functions of several variables and space co-ordinates; partial differential equations. Sophomore and Junior years, both semesters. M, at 2:15; W, F, at 8:30. Assistant Professor Belcher.

For the year 1916-1917 this course may be combined with B14 and D20.

C19. DIFFERENTIAL AND INTEGRAL CALCULUS. (3 hours.) Continuation of Mathematics B14. Junior year, first semester. M, W, F, at 11:15. Associate Professor Russell.

D20. THEORY OF EQUATIONS. (3 hours.) Analysis and solution of higher algebraic equations; review of determinants; elementary reductions and processes, elimination and 1st

nsformations. Alternates with Mathematics D24. Junior and Senior years, second semester. M, W, F, at 11:15. Associate Professor Russell.

D24. DIFFERENTIAL EQUATIONS. (3 hours.) A general course in the theory and solution of differential equations. Junior and Senior years, second semester. (Not given in 1916-1917.) Associate Professor Russell.

The following cycle of courses is given to Juniors and Seniors: Mathematics D25 and D26, Mathematics D27 and D28, and some form of Mathematics D21 and D22. At present but one of the three courses is given each year.

D21 and D22. HIGHER ANALYSIS. (3 hours each.) This course is an extension of the more elementary analysis developed in Mathematics B7, B8, C17 and C18. Its content differs from year to year. Its purpose is by the study of the principles and methods of some of the great modern mathematicians like Cauchy, Riemann, Clebsch and Gauss in certain subjects like the theory of functions or the general theory of algebraic curves, to furnish an introduction to the realm of higher mathematics and to develop still further independence and power in sound mathematical reasoning. Junior and Senior years, both semesters. T, Th, S, at 8:30. Associate Professor Russell and Professor Brackett.

D25 and D26. ANALYTIC MECHANICS. (3 hours each.) Mathematical treatment of important principles in mechanics; applications to numerous problems; discussion of general application of analytic reasoning to other physical problems. Junior and Senior years, both semesters. (Not given in 1916-1917.) Professor Brackett.

D27 and D28. PROJECTIVE GEOMETRY. (3 hours each.) A deductive study of general projective geometry with attention to the foundations of geometry. Junior and Senior years, both semesters. (Not given in 1916-1917.) Professor Brackett.

ASTRONOMY

B1 and C2. GENERAL ASTRONOMY. (3 hours each.) A general course of lectures and recitations in descriptive astronomy with regular evenings at the observatory, and simple observations systematically recorded in notebooks. This course is designed for students who have had only elementary courses in physics, chemistry and trigonometry. Class room, two hours a week; lecture and observatory amounting to one exercise a week. Junior and Senior years, both semesters. M, W, F, at 11:00. Professor Brackett.

For the year 1916-1917 B1 and C2 will be combined in a single semester course.

C3. DESCRIPTIVE ASTRONOMY. (3 hours.) A study of the essential facts and principles of astronomy with lectures and readings on the history of its development as a science and discussion of theories of cosmogony and evolution. Systematic observation of certain objects with the equatorial. This course is designed for students who have a working knowledge of analytic geometry and calculus and of the more important principles in physical science; or it may be taken as an advanced course by those who have had Astronomy B1 and C2. Some preparation in free-hand and mechanical drawing also is very desirable. Junior and Senior years, first semester. (Not given in 1916-1917.) Professor Brackett.

D4. THEORETICAL AND PRACTICAL ASTRONOMY. (3 hours.) Spherical co-ordinates; least squares; determination of time, latitude and longitude with sextant and theodolite; regular observation work with equatorial and transit. Prerequisite: Astronomy B1 and C2, or C3. This course may be taken in conjunction with Astronomy B1 by students who have had sufficient preparation in mathematics and drawing. Ordinarily alternates with Astronomy D6. Class room, one hour a week; lecture and observatory amounting to two exercises a week. Junior and Senior years. (Not given in 1916-1917.) Professor Brackett.

6. **ASTROPHYSICS.** (3 hours.) A review of the principles of spectrum analysis, and the results obtained in physical and chemical laboratories; a study of astronomical spectroscopy, of uses of spectrographs and spectroheliographs, and of recent advances in the subject; observatory work with the horizontal meridian telescope and spectrograph. Ordinarily alternates with Astronomy D4. Prerequisites: Astronomy B1 and C2. This course may be taken in conjunction with Astronomy C2 by students who have sufficient preparation in physical science. Class room, one hour a week; lecture and observatory amounting to two exercises a week. Junior and Senior years, second semester. M, at 3:15; W, F, at 9:30. Laboratory hours to be arranged. Laboratory fee \$5.00. Professor Brackett. Those who wish to select Astronomy as a major should consult the head of the department concerning the requirements.

Physics and Engineering

PHYSICS

31. **GENERAL PHYSICS.** (4 hours.) Mechanics and Sound. Lectures, recitations and laboratory work. This course is designed for students desiring to take one year of work in general physics, either for its cultural value, or to meet the physics requirement of courses in medicine, biology, chemistry, or astronomy. It may be successfully pursued without any previous course in the subject. Prerequisites: Algebra, geometry and plane trigonometry. Class room, three hours a week; laboratory, one exercise a week. Freshman and Sophomore years, first semester. Class room, T, Th, S, at 8:30; laboratory, T, at 1:15. Laboratory fee \$4.00. Professor Hitchcock.

32. **GENERAL PHYSICS.** (4 hours.) Heat, Magnetism, Electricity and Light. Class room, three hours a week; laboratory, one exercise a week. Junior year, second semester. Class room, T, Th, S, at 8:30; laboratory, T, at 1:15. Laboratory fee, \$6.00. Professor Hitchcock.

33. **MECHANICS OF SOLIDS AND FLUIDS.** (3 hours.) Lectures

and recitations. Prerequisites: A good working knowledge of elementary mathematics, including analytic geometry and calculus, and a course in secondary school physics. Required for all engineering courses. Three hours a week. Sophomore and Junior years, first semester. (Not given in 1916-1917.) Professor Hitchcock.

D4. HEAT, WAVE MOTION AND SOUND. (3 hours.) Continuation of Physics C3. Sophomore and Junior years, second semester. (Not given in 1916-1917.) Professor Hitchcock.

C5 or D5. LIGHT, STATIC ELECTRICITY AND MAGNETISM. (3 hours.) Continuation of Physics D4. If taken as a D course, additional work will be required. Three hours a week. Junior and Senior years, first semester. T, Th, S, at 11:15. Professor Hitchcock.

D6. CURRENT ELECTRICITY. (3 hours.) Continuation of Physics C5 or D5. Junior and Senior years, second semester. T, Th, S, at 11:15. Professor Hitchcock.

Courses C3, D4, C5 and D6 are designed to meet the physical requirement of the best engineering schools. Accordingly considerable attention is given to the applications of the various subjects discussed to engineering practice.

C9 and C10. PHYSICAL MEASUREMENTS. (1½ hours.) Exposition of the theory and methods of physical measurement, instruction and practice in the adjustment and use of instruments of precision in the various branches of the subject. Junior and Senior years, both semesters. T, Th, at 1:15. Laboratory fee \$4.00 each semester. Professor Hitchcock.

D13 and D14. APPLIED MECHANICS. (3 hours each.) Same as Engineering D13 and D14. Junior and Senior years, both semesters. (Not given in 1916-1917.) Assistant Professor Belcher.

ENGINEERING

The College does not give at present a full technical course in engineering; but for students who contemplate engineering work and wish also the foundation and culture of college training.

a course of studies has been arranged. Graduates who have
passed this course complete their work for a degree in the
standard schools of engineering or technology in two years.

A1 and A2. GRAPHICS. (2 hours each.) A course in letter-
ing and linear drawing, including the use and care of the in-
struments, practice in lining and accurate constructions, geomet-
rical problems and construction of geometrical curves. Fresh-
man year, two exercises a week, both semesters. Laboratory,
Th, F, at 1:15. Assistant Professor Belcher.

In case a student offers for credit other work in Graphics
under the heading of Engineering A1 and A2, the certificate of former
work must be accompanied by the plates drawn and the in-
structor will judge whether the character and amount of work
are satisfactory. This must in every case include evidence
of ability in lettering.

A3 and B4. GRAPHICS. (2 hours each.) An introductory
course in orthographic and isometric projections, shade lines and
shadows. Prerequisites: Engineering A1 and A2. Sophomore
year, two exercises a week, both semesters. Laboratory, Th, F,
at 1:15. Assistant Professor Belcher.

C11 and C12. SURVEYING. (3 hours each.) Class room work;
field work with compass, transit, level and sextant; platting and
computation from field notes; topographical surveying and map-
making (Gillespie; Johnson.) Prerequisites: Mathematics B7
and B8 and Engineering A1 and A2. Sophomore year, both
semesters. Alternates with Engineering C15 and C16. (Not
given in 1916-1917.) Assistant Professor Belcher.

C15. DESCRIPTIVE GEOMETRY. (3 hours.) Study and prac-
tice in the elements of projection and perspective; intersections
of surfaces and solids. Alternates with Engineering C11.
Prerequisites: Engineering A1 and A2. Sophomore year, first
semester. W, Th, F, at 1:15. Assistant Professor Belcher.

C16. PERSPECTIVE. (3 hours.) Principles of shades and
shadows, of perspective and the perspective of shadows; much
practice in perspective drawing. Alternates with Engineering
C12. Prerequisite: Mathematics C15. Sophomore year, sec-

ond semester. W, Th, F, at 1:15. Assistant Professor Belcher.

D13 and D14. APPLIED MECHANICS. (3 hours each.) study of the principles of mechanics of rigid bodies with problems selected with reference to the needs of engineering students. The calculus and graphical methods are freely used. The course includes problems in statics, on reactions, stress in frames, center of gravity, moments of inertia, and problems in kinematics and dynamics, including rectilinear and curvilinear motion, harmonic motion, momentum and angular momentum, work, power and kinetic energy. Junior and Senior years, both semesters. (Not given in 1916-1917.) Assistant Professor Belcher.

Chemistry and Geology

CHEMISTRY

Students who wish to major in Chemistry should be prepared to meet the following requirements:

1. A knowledge of elementary Physics, equivalent to Physics B1 and B2.
2. Sufficient acquaintance with French and German to enable the student to follow with tolerable ease the literature of the subject.
3. Mathematics, including the elements of the Calculus.
4. Chemistry C7, C8, C9 and C10 and six or more hours of D courses in Chemistry, the precise nature and number to be determined in individual cases.
5. In some cases a special examination covering the general field of Chemistry.

A breakage deposit of \$5.00 is required of all students taking laboratory courses. At the conclusion of the work the deposit, less breakage, is returned.

A1 or A2. THE ELEMENTS OF CHEMISTRY. (4 hours.) An introductory course covering the general field, and intended for those who have no previous knowledge of the subject. To be followed by Chemistry A3 or A4. Class room, three hours a week; laboratory, one exercise a week. Freshman year, either

First semester T, Th, S, at 8:30. Second semester, at 2:15; W, F, at 8:30. Laboratory, T, at 1:15 or M, at 1:15. Laboratory fee, \$6.00. Professor Lyman and Assistant.

A3 or A4. SYSTEMATIC CHEMISTRY OF THE METALS. (3 hours.) Devoted chiefly to the study of the metals and their properties. Open to those who have taken Chemistry A1 or A2, or equivalent. To be accompanied by Chemistry B31, or B32, B33 or B34. Class room, three hours a week Freshman year, either semester. First semester, two divisions. I. T, Th, S, at 7:30; II. M, at 1:15; W, F, at 7:30. Second semester, T, Th, S, at 7:30. Mr. Flint.

B5 or B6. SYSTEMATIC CHEMISTRY OF THE NON-METALS. (3 hours.) Devoted chiefly to the study of the non-metals and their theories of Chemistry. Prerequisites: Chemistry A3 or A4. To be accompanied by Chemistry B35 or B36. Class room, three hours a week. Freshman and Sophomore years, either semester. First semester, M, at 2:15; W, F, at 8:30. Second semester, two divisions, I. T, Th, S, at 7:30; II. M, at 1:15; W, F, at 7:30. Professor Lyman.

B31 or B32. INORGANIC PREPARATIONS. (1 hour.) Preparation of some of the simpler inorganic compounds, which illustrate the matter brought out in class room in the courses listed above. Intended primarily for those who are taking Chemistry A3 or A4, but who do not intend to take further work in the subject of Chemistry. Freshman year, either semester. M, at 7:30 or T, at 1:15. Laboratory fee, \$5.00. Professor Lyman and Mr. Flint.

B33 or B34. QUALITATIVE ANALYSIS. (2 hours.) Analysis of metals and positive ions. Laboratory periods twice a week, from which time may be taken for one class meeting a week. Intended to accompany Chemistry A3 or A4. Freshman year, either semester. Class room, M, at 9:30; T at 1:15. Laboratory (four periods from which two are to be chosen), M, at 9:30; T, Th, F, at 1:15. Laboratory fee, \$10.00. Assistant Professor Bartlett and Mr. Woodford.

B35 or B36. QUALITATIVE ANALYSIS. (2 hours.) Inorganic Analysis with special reference to non-metals and negative ions. Laboratory periods twice a week from which one hour may be taken for class meeting. Intended to accompany Chemistry A1 or B6. Freshman and Sophomore years, either semester. Classroom, F, at 3:15. Laboratory (four periods from which two are to be chosen), M, at 7:30; T, Th, F, at 1:15. Laboratory fee, \$10.00. Professor Lyman and Mr. Woodford.

C7. QUANTITATIVE ANALYSIS. (3 hours.) Theory and practice of quantitative methods, chiefly gravimetric, including problems in stoichiometry. Intended to give the student a knowledge of the fundamental methods of work. Prerequisites: Qualitative Analysis. Occasional lectures; laboratory, three exercises a week. Sophomore, Junior and Senior years, first semester. Lecture, M, at 7:30. Laboratory, M, at 7:30; T, Th, F, at 1:15. Laboratory fee, \$12.00. Assistant Professor Bartlett and Assistant.

C8. QUANTITATIVE ANALYSIS. (3 hours.) Theory and practice of quantitative methods, chiefly volumetric. Prerequisites: Qualitative analysis. Sophomore, Junior and Senior years, second semester. Lecture, M, at 7:30. Laboratory, M, at 7:30; T, Th, F, at 1:15. Laboratory fee, \$12.00. Assistant Professor Bartlett and Assistant.

C9 and C10. SYSTEMATIC ORGANIC CHEMISTRY. (3 hours each.) A study of the more important compounds of carbon with the preparation of about twenty organic substances. Prerequisites: Chemistry A1 and A3, or Chemistry A3 and A4. Classroom, two hours a week; laboratory, one exercise a week. Sophomore, Junior and Senior years, both semesters. Classroom, M, W, at 11:15. Laboratory, T, F, at 1:15. Laboratory fee, \$6.00 per semester. Professor Lyman.

C11 and C12. MINERAL CHEMISTRY. (3 hours each.) A study of morphology of crystals, and the formation, occurrence, composition, properties and use of minerals. Laboratory work: (1) Crystal drawings, (2) Blowpipe analysis and identification of about one hundred minerals. Prerequisites: Qualitative

lysis. Class room, two hours a week; laboratory, one exercise a week. Class room, M, at 1:15; W, at 7:30. Laboratory, at 7:30. Laboratory fee, \$4.00 per semester. Mr. Woodford.

C13. ADVANCED ORGANIC CHEMISTRY. (3 hours.) Intended to supplement Chemistry C9 and C10 so that the student may be better fitted for university work. A study of certain typical reactions, with the preparation of compounds illustrating the changes studied. Prerequisites: Chemistry C9 and C10. Lectures, one hour a week; laboratory, two exercises a week. Junior and Senior years, first semester. Class room, F, at 7:30. Laboratory hours to be arranged. Laboratory fee, \$12.00. Professor Lyman.

C14. ELEMENTS OF PHYSIOLOGICAL CHEMISTRY. (3 hours.) The preparation and study of certain organic substances, especially of those which have to do with physiological chemistry. Intended to prepare the student for work in physiological chemistry but not to take the place of the courses given in medical school in that subject. Prerequisites: Chemistry C9 and C10. Lectures, one hour a week; laboratory, two exercises a week. Junior and Senior years, second semester. Lecture, F, at 7:30. Laboratory hours to be arranged. Laboratory fee, \$10.00. Professor Lyman.

C15 and C16. AGRICULTURAL CHEMISTRY. (3 hours each.) The study of the origin of soils, their physical, chemical and biological properties, and the relation of these to plant growth. The effects of fertilizers, irrigation, etc., are also considered. Laboratory work is roughly quantitative, and includes experiments in soil physics as well as in soil chemistry. Prerequisites: Chemistry B33 and B35. Class room, two hours a week; laboratory, one period a week. Sophomore, Junior and Senior years, both semesters. Class, W, at 2:15; F, at 11:15. Laboratory, T, at 11:15. Laboratory fee, \$5.00 per semester. Mr. Woodford.

C17. ADVANCED QUANTITATIVE ANALYSIS. (3 hours.) A continuation and further development of Chemistry C7 and C8. This may take the form of rock analysis, agricultural analysis (soils, etc.) or some other practice in standard quantitative

methods. Laboratory, three exercises a week. Junior and Senior years, first or second semester. Hours to be arranged. Laboratory fee, \$12.00. Assistant Professor Bartlett and Assistant.

D18. ADVANCED QUANTITATIVE ANALYSIS. (3 hours.) This course may take the form of special agricultural analysis (fertilizers, insecticides, fungicides, etc.); or of gas analysis, including general technical processes and the determination of the densities of gases. Prerequisite: Chemistry, C7 and C8. Laboratory, three exercises a week. Junior and Senior years, first or second semester. Hours to be arranged. Laboratory fee, \$12.00. Assistant Professor Bartlett and Assistant.

D19 and D20. ADVANCED CHEMISTRY SEMINAR. (1 hour each.) This course is intended for those who wish to come in contact with the most recent developments in the field of Chemistry, both theoretical and applied. The student is expected to read the current literature on the subject and to make frequent verbal and written reports at class meetings. Prerequisite: Chemistry C7, C8, C9 and C10, and Physics B1 and B2 or equivalent; also a reading knowledge of a modern language. Credit is given for this work only when it is taken in connection with some other D course in this department. Class room, one hour a week. Senior year, both semesters. M, at 4:00. Professor Lyman and Assistant Professor Bartlett.

D21 and D22. PHYSICAL CHEMISTRY. (3 hours each.) A survey of the whole subject is given, including the relation of mass to volume, phase relations, thermochemistry and thermodynamics, chemistry of solutions and the dissociation hypothesis, electro-chemistry and optical chemistry. The laboratory work consists of the study of physico-chemical methods as related to the subject matter of the lectures. Class room, two hours a week; laboratory, one exercise a week. Open to Juniors and Seniors who have passed satisfactorily Chemistry C7 and C8 and Physics B1 and B2 and Analytical Geometry and Calculus must precede or accompany this course. Lectures, M, at 1:15; W,

0. Laboratory hours to be arranged. Laboratory fee, \$8.00. Assistant Professor Bartlett and Mr. Flint.

D23-D24. ADVANCED LABORATORY INVESTIGATION AND RESEARCH. (1 to 3 hours each, to be agreed upon at time of registration.)

This course is open to a limited number of students who present the written certification of the instructor in charge as to equateness of preparation and experience. There is no laboratory fee in Chemistry D23-D24.

(a) ORGANIC. The work for the year 1916-1917 will be the preparation of esters of paranitrobenzyl alcohol. Also, a study of improved methods for the preparation of some common organic compounds such as acetamid. Both semesters. Professor Woodman.

(b) PHYSICO-CHEMICAL. The work during the year 1916-1917 will take the form of electro-chemistry. Certain oxidation reactions are to be studied. Considerable experience in laboratory manipulation will be acquired. Both semesters. Assistant Professor Bartlett.

(c) MINERALOGICAL. The collection and identification of mineral specimens, together with at least one quantitative chemical analysis. Second semester. Mr. Woodford.

GEOLOGY

B2. GEOLOGY. (3 hours.) Dynamic and structural geology. Class work primarily, with occasional Saturday excursions. Prerequisites: Elementary Physics, and Chemistry A1 and A2, or their equivalent. Sophomore, Junior and Senior years, second semester. T, Th, S, at 9:30. Mr. Woodford.

C3. PALEONTOLOGY. (3 hours.) A one semester course primarily devoted to the study of paleontology, but with a brief introduction to structural and dynamical Geology. Studies are made of local geology. Prerequisites: Botany and Zoology. Junior and Senior years, both semesters. T, Th, S, at 9:30. Assistant Professor Crawford.

Biological Sciences

So important are German and Chemistry to the advanced courses in Biological Sciences that the necessity for thorough preparation in these subjects is especially emphasized for those who elect a major group in these departments.

GENERAL BIOLOGY

A1. GENERAL BIOLOGY. (3 hours.) A course introductory to the study of animal life, comprising field and laboratory work on living organisms, and especially scientific methods in observing and recording facts. This course is prerequisite to further work in zoology. Class room, two hours a week; laboratory, one exercise a week. Freshman year, first semester. Class room, M, W, at 11:15; laboratory, T, W, or Th, at 1:15. Laboratory fee, \$5.00. Professor Hilton and Assistant.

A2. GENERAL BIOLOGY. (3 hours.) A brief study of some of the fundamental biological phenomena manifested in the plant kingdom, such as evolution, adaptational developments, life processes, etc. A slight acquaintance, also, will be gained with the various groups of plants and their chief characteristics. Laboratory and field work; one period a week; lecture, two hours a week. This course is intended primarily for those who desire a glimpse into the general field of Biology. Those intending a major in botany are advised to enter directly Botany B. Freshman year, second semester. Class room, M, W, at 11:15; laboratory, T, W, or Th, at 1:15. Laboratory fee, \$5.00. Assistant Professor Crawford.

ZOOLOGY

B11. GENERAL ZOOLOGY. (3 hours.) Lectures and laboratory work. Types of classes and phyla of animals dissected and studied and careful drawings made of parts and organs. Constant use of the microscope. The large collections of the museum used for illustrative purposes. (Parker, Haswell, Brooks and other books of reference.) Class room, two hours a week; laboratory, one exercise a week. Prerequisites: Biology A

1 A2 or equivalents. Sophomore and Junior years, first semester. Class room, T, Th, at 11:15; laboratory, M, at 7:30. Laboratory fee, \$5.00. Professor Hilton.

312. VERTEBRATE ZOOLOGY. (3 hours.) A broad treatment of the comparative anatomy and organology of vertebrates, based on detailed work with representative types of the fishes, amphibians, reptiles, birds and mammals. Laboratory work with skeletons and preserved specimens. Class room, two hours a week; laboratory, one period. Prerequisites: Physiology B3 or Zoology B11. Sophomore and Junior years, second semester. Class room, T, Th, at 11:15; laboratory, M, at 7:30. Laboratory fee, \$5.00. Professor Hilton.

318. ENTOMOLOGY. (3 hours.) The anatomy and physiology of insects studied and their life history traced. Insects reared and their transformation studied; species of all orders identified by use of laboratory manuals. A good collection of native and exotic insects is at the command of the student. Laboratory and field work made prominent. Class room, two hours a week; laboratory, one exercise a week. Prerequisite: Biology A1, Physiology B3, or Zoology B11. Sophomore, Junior, and Senior years, second semester. Class room M, W, at 11:15; laboratory, T, or Th, at 1:15. Laboratory fee, \$5.00. Professor Hilton.

331. SYSTEMATIC INVERTEBRATE ZOOLOGY. (3 hours.) Local groups of invertebrates exclusive of insects will be studied in the field and laboratory. The particular groups considered will be: Diplopods, chilopods, arachnids. Prerequisite: Zoology B1 or B18. Sophomore or Junior year, first semester. Lecture, one hour a week, Th, at 7:30; laboratory and field work, two periods a week; laboratory, M, 7:30; or W, at 1:15. Laboratory fee, \$5.00. Professor Hilton.

332. SYSTEMATIC VERTEBRATE ZOOLOGY. (3 hours.) Local vertebrates, especially birds but also amphibia, reptiles, and mammals studied in the laboratory and in the field. Prerequisite: Zoology B11. Sophomore or Junior year, second semester. Lecture, one hour a week, Th, at 7:30; field and

laboratory work, two periods a week; laboratory, M, at 7:30; or W, at 1:15. Laboratory fee, \$3.00. Professor Hilton.

D33. COMPARATIVE NEUROLOGY. (3 hours.) Comparative anatomy of the central nervous system of vertebrates. The laboratory work will consist of special dissections and study of microscopical preparations. Prerequisites: Zoology B11 and B12, or Physiology B3 and B4. Junior and Senior years, first semester. Lecture, one hour a week, F, at 1:15; laboratory, two periods a week, M, at 7:30; W, at 1:15. Laboratory fee, \$5.00. Professor Hilton.

C13. ADVANCED ZOOLOGY. (2 or 3 hours.) A study of special groups of invertebrates or vertebrates well represented in California and on the West Coast. A continuation of Zoology B11 or B18, chiefly laboratory and field work. Prerequisite: Zoology B11 or B18. Junior and Senior years, first or second semester. Field work and laboratory. T, Th, F, at 1:15. Professor Hilton.

D14. BIONOMICS. (3 hours.) An introduction to modern discussions and modern experimental and statistical evidence on variation, heredity and eugenics. A general treatment of the biological bases of plant and animal breeding, and of sociology and human evolution. A course of lectures, with essays and prescribed readings. Prerequisite: One year of biological work. Junior and Senior years, second semester. M, at 1:15; W, F, at 7:30. Professor Hilton.

D15 or D16. ADVANCED ZOOLOGY. (3 hours.) A continuation of Zoology C13. Prerequisite: Zoology C13. Junior and Senior years, either semester. Field work and laboratory. Hours to be arranged with the instructor. Laboratory fee, \$7.00. Professor Hilton.

D19 and D20. SPECIAL ENTOMOLOGY. (3 hours each.) Detailed investigations into the anatomy, life histories and economic relations of some of the groups of insects most prejudicial to the interests of mankind. Designed especially for the students intending to become growers, planters, economic entomologists, or doctors of medicine. Prerequisites: Zoology

and B18. Junior and Senior years, first and second semesters. Field work and laboratory. Hours to be arranged with instructor. Laboratory fee, \$7.00. Professor Hilton.

PHYSIOLOGY

A1 and A2. APPLIED PHYSIOLOGY AND HYGIENE. (1 hour each.) A general course in the essentials of personal hygiene, with such brief excursions into the field of physiology as are necessary to an understanding of the hygienic principles involved. Supplementing this study of the problems of the individual, there will be included a survey of the principles of public hygiene and sanitation, and a brief résumé of the most approved measures concerned in first aid to the injured. Required of all freshmen, both semesters. F, at 11:15. Assistant Professors Schott and Squire.

B11 and B12. PUBLIC HYGIENE. Advanced course. A series of lectures on the principles and requirements of public sanitation, and the problems of general morbidity and mortality. Required of all Juniors. Hours to be announced. Associate Professor Stoughton.

B13 and B14. PROBLEMS OF HEREDITY AND EUGENICS, AND RELATED QUESTIONS OF PERSONAL AND PUBLIC HYGIENE. Advanced course. Required of all Seniors. Hours to be announced. Associate Professor Stoughton and Assistant Professor Squire.

B3 and B4. ANATOMY AND PHYSIOLOGY. (3 hours each.) Human and comparative. Lectures and laboratory work. Parts of organs studied and compared with the same in the lower vertebrates. Azoué models, preserved specimens and organs, skeletons are used. Careful drawings by each student of dissections, tissues and organs. (Gray, Quain, Stewart, Howells, Hart, Reighard, Jennings, and other works of reference.) Classroom, two hours a week; laboratory, one exercise a week. sophomore year, both semesters. Classroom, W, F, at 1:15; laboratory, T, Th, at 1:15. Laboratory fee, \$3.00. Assistant Professor Schott.

D5. HISTOLOGY. (3 hours.) Vertebrate. The microscopic study of cells, tissues and organs of man and the higher vertebrates. Special attention given to methods. Those intending to study medicine after graduation will find this course and course in embryology very helpful. Prerequisite: Physiology B3 and B4. Junior and Senior years, first semester. (Not given in 1916-1917.) Laboratory fee, \$8.00. Professor Hilton.

D6. HISTOLOGY. (3 hours.) A continuation of D5, including the consideration of some special methods and problems. Prerequisite: Physiology D5. Junior and Senior years, second semester. (Not given in 1916-1917.) Laboratory fee, \$8.00. Professor Hilton.

D7. EMBRYOLOGY. (3 hours.) Comparative vertebrate embryology. A study of the development of vertebrates up to and including the formation of adult organs. The eggs of amphibians and the embryos of birds and mammals, furnish the material for the study. Prerequisite: Physiology B3 and B4 or Zoology B11 and B12. Junior and Senior years, first semester. W, at 8:30; T, Th, at 1:15. Laboratory fee, \$8.00. Professor Hilton.

D8. EMBRYOLOGY. (3 hours.) A continuation of D7. Special attention may be given to special methods and problems. Prerequisite: Physiology D7. Junior and Senior years, second semester. W, at 8:30; T, Th, at 1:15. Laboratory fee, \$8.00. Professor Hilton.

BOTANY

B21. GENERAL BOTANY. (3 hours.) A general course covering briefly in two semesters the entire field of botany, with special emphasis on the morphology and phyletic relations and evolution of plants. A necessary introductory course for advanced work in botany. Both laboratory and field work. Laboratory, one exercise a week; lectures, two hours a week. Prerequisite: Biology A2 or its equivalent. Sophomore and Junior year, first semester. W, F, at 7:30; laboratory, T, Th, at 1:15. Laboratory fee, \$3.50. Assistant Professor Crawford.

B22. GENERAL BOTANY. (3 hours.) A continuation of

ing primarily with the flowering plants (Phanerogams.) prerequisite. Botany B21 or its equivalent. Sophomore or prior year, second semester. W, F, at 7:30; laboratory, T, W, at 1:15. Laboratory fee, \$3.50. Assistant Professor Crawford.

25. MYCOLOGY. (3 hours.) A systematic study of the great group of fungi, with special emphasis on the morphological, systematic and cytological phases. An immense herbarium of fungi is available for reference and study. Very important for those intending to study Plant Pathology. Prerequisite: Botany B21 and B22, or their equivalents. Laboratory, two periods a week; lecture, one hour a week. Junior and Senior years, first semester. S, at 11:15; laboratory, T, Th, at 1:15. Laboratory fee, \$5.00. Assistant Professor Crawford.

26. PLANT PATHOLOGY. (3 hours.) A study of plant diseases, their causal agents, methods of controlling them, and methods of studying them in the laboratory. An important study for those intending to enter into any phase of agriculture. Laboratory, two periods a week; lecture, one hour a week. Prerequisite: Botany C25, unless by special arrangement. Junior and Senior years, second semester. S, at 11:15; laboratory, T, Th, at 1:15. Laboratory fee, \$5.00. Assistant Professor Crawford.

27. PLANT PHYSIOLOGY. (3 hours.) A study of the behavior and life processes of plants, their nutrition, reproduction, etc. A glass house and a well equipped laboratory are available for this work. Laboratory, two periods a week; lecture, one hour a week. Prerequisite: Botany B22. Junior and Senior years, second semester. Lecture, Th, at 11:15; laboratory, M, at 7:30, and F, at 1:15. Laboratory fee, \$10.00. Assistant Professor Crawford.

28. SUBTROPICAL HORTICULTURE. (2 hours.) An introductory course in the study of economic fruits and fruit products of the Pacific Slope and the subtropics. Laboratory, one period a week; lecture, one hour a week. Prerequisite: Botany B22. Junior and Senior years. (Not given in 1916-1917.) Laboratory fee, \$3.50. Assistant Professor Crawford.

D27. ADVANCED BOTANY. (3 hours.) A detailed study of morphology and taxonomy of some of the groups of plants. Chiefly a laboratory course and the work for the most part is individual. Both laboratory and field work. Laboratory, two periods a week; conference or class room, one hour a week. Prerequisites: Botany A21 and B22. Junior or Senior year, first semester. Hours to be arranged with the instructor. Laboratory fee, \$5.00. Assistant Professor Crawford.

D28. SPECIAL BOTANY. (3 hours.) Same as Botany D27, continuation of that course. Prerequisites: Botany A21 and B22. Hours to be arranged with the instructor. Laboratory fee, \$5.00. Assistant Professor Crawford.

D31 and D32. SPECIAL MYCOLOGY. (3 hours each.) Special and detailed investigations in fungi or plant diseases. Laboratory and field work and occasional conferences with the instructor. Work for the most part is individual. Time to be arranged with the instructor. Prerequisite: Botany C25. Junior and Senior years. Laboratory fee, \$5.00 each. Assistant Professor Crawford.

C30. PLANT PROPAGATION. (3 hours.) The elements and principles of the propagation of plants and improvement of plant varieties. Practice in the care of seeds, cuttings, bulbs, and potted plants; in grafting and budding; in hybridizing and selecting of plants, etc. A glass house, lath house and special laboratory equipment are available for this course. Designed for those who are interested in nursery work, landscape gardening and many phases of horticulture. Class room, one hour a week; laboratory, two periods a week. Prerequisite: C23. Junior or Senior years, second semester. (Not given in 1916-1917.) Laboratory fee, \$10.00. Assistant Professor Crawford.

Physical Education

A course of Physiology and Hygiene, described under the department of Physiology as A1 and A2. Applied Physiology and Hygiene is required of all Freshmen. The courses are graded systematic and progressive. Their purpose is to remedy ordinary physical defects, and develop endurance and co-ordination.

Courses A1 to C8 inclusive are for men. Physical measurements are taken at the beginning and end of Freshman and sophomore years, and are optional for Juniors and Seniors. They are designed primarily to determine vital strength and organic weakness, secondarily to determine muscular strength. The measurements obtained will be plotted on anthropometrical scales to determine development and comparison with the average. Any individual who is below normal will be given prescribed exercise.

A1 and A2. ELEMENTARY GYMNASTICS*. (1 hour each.) Calisthenics, U. S. A. Regulations without arms: dumbbell, and Indian club drills; exercise on horizontal bar, parallel bars, side horse, long horse, bucks, ladders, etc. The closing minutes of each class period will be devoted to the teaching and playing of games. Two class exercises per week. Two periods in games or outdoors exercises, to be elected by the student in consultation with the director. Freshman year, both semesters. T, F, at 4:15. Assistant Professor Schott and Assistant.

B3 and B4. ADVANCED GYMNASTICS*. (1 hour each.) This course will follow Gymnastics A1 and A2, and will take up more advanced exercises, including mat work, tumbling, advanced apparatus work, and athletic and gymnastic dancing. Required, sophomore year, both semesters. T, F, at 5:15. Assistant Professor Schott and Assistant.

C5 and C6. SPORTS. ($\frac{1}{2}$ hour each.) Two periods of outdoor exercise in games or other exercises to be elected by the student in consultation with the director, with lectures on social hygiene. Required, Junior year, both semesters. T, F, at 5:15. Assistant Professors Schott and Nixon.

C7 and C8. SPORTS. ($\frac{1}{2}$ hour each.) Two periods of outdoor exercise in games or walking as in C5 and C6, with lectures on hygiene as related to heredity and eugenics. Required, Senior year, both semesters. T, F, at 5:15. Assistant Professors Schott and Nixon.

* The men in athletics will, upon recommendation of the coach, be excused from actual participation in gymnastics during the period covered by the particular sport in which they are engaged.

The work for women is at once educative and practical in its aims, endeavoring not only to correct abnormalities of structure and function, but to prevent their occurrence. Physical and medical examinations are required of all entering students; the physical examination is repeated at the end of each year.

A11 and A12. GYMNASIUM PRACTICE. (1 hour each.) Two periods of gymnasium work; from November 1 to May 1. Two periods of outdoor sports, elected by the student subject to the approval of the director; from October 1 to June 1. Required, Freshman year. M, Th, at 3:15, or M, Th, at 4:15. Assistant Professor Squire and Miss Dixon.

B13 and B14. GYMNASIUM PRACTICE. (1 hour each.) A continuation of A11 and A12. Two periods, following the general arrangement of A11 and A12. Required, Sophomore year. M, Th, at 5:15. Assistant Professor Squire and Miss Dixon.

C15 and C16. SPORTS. ($\frac{1}{2}$ hour each.) Two periods of outdoor sports elected by the student, subject to the approval of the director; from October 1 to June 1. Junior year. Assistant Professor Squire and Assistant.

C17 and C18. SPORTS. ($\frac{1}{2}$ hour each.) Two periods of outdoor sports as in C15 and C16, with lectures on hygiene as related to heredity and eugenics. Senior year. Assistant Professor Squire and Assistant.

B19 and B20. FOLK AND NATIONAL DANCING. One period; from November 1 to May 1. Elective for Freshmen and Sophomores. Assistant Professor Squire.

C21 and C22. FOLK AND NATIONAL DANCING. ($\frac{1}{2}$ hour each.) One period; from November 1 to May 1. Prerequisites: Physical Education B19 and B20 or their equivalent. Elective for Sophomores, Juniors and Seniors. Assistant Professor Squire.

C23 and C24. AESTHETIC DANCING. One period; from November 1 to May 1. Prerequisites: Physical Education C21 and C22, or their equivalent. Elective for Juniors and Seniors. Assistant Professor Squire.

C25 and C26. GYMNASIUM PRACTICE. One period; from November 1 to May 1. Prerequisites: Physical Education A11 and B2, B13 and B14, or their equivalent. Elective for Juniors and Seniors. Assistant Professor Squire and Assistant.

Forty minutes constitutes a period. B19 and B20, C21 and C22, C23 and C24, C25 and C26, or Swimming may be substituted for a period of out-door exercise. Hours and credits given for these courses may not be used in the requirements for graduation.

C31 and C32. THEORY OF ATHLETICS. (1 hour each.) Open to men only. The various athletic sports, football, basketball, baseball and track athletics, will be discussed from the standpoint of coaching, training and officiating. Every student taking this course will be given some practical work in the technique of coaching and officiating. This course is elective, and is especially designed for students who expect to coach high school athletics incidental to their teaching. This course is open to Seniors only. Both semesters. F, at 2:15. Assistant Professor Schott.

C33 and C34. PLAY GROUND METHODS. (1 hour each.) Theory and philosophy of play. Equipment, construction and management of city and rural play grounds. Elective, one hour each week. Students taking this course will be required to teach the various play ground activities. Junior and Senior years, both semesters. Th, at 2:15. Assistant Professor Schott.

I. History, Social Sciences and Philosophy

History and Constitutional History

HISTORY

A17 and A18. GENERAL EUROPEAN HISTORY. (3 hours each.) An introductory course in which intensive study of selected periods is made. Intended to bring out modern historical methods. Freshman year, both semesters. T, Th, S, at 11:15. Assistant Professor Westergaard.

A7. ENGLISH HISTORY TO 1603. (3 hours.) An introductory

course, in which emphasis is laid upon the use of sources and methods of historical work. Freshman year, first semester. (Not given in 1916-1917.)

A8. ENGLISH HISTORY SINCE 1603. (3 hours.) A continuation of History A7, with similar aims and methods. Freshman year, second semester. (Not given in 1916-1917.)

A13 and A14. ANCIENT CLASSICAL HISTORY. (3 hours each.) A history of more recent archeological investigation in the general field of ancient history. (Not given in 1916-1917.) Professor Stearns.

B1. MEDIEVAL HISTORY. (3 hours.) From the fall of Rome to the Renaissance. Lectures on the use of sources, supplemented by practice work, serve to introduce the student to modern historical methods. Sophomore year, first semester. Th, S, at 7:30. Assistant Professor Westergaard.

B2. THE RENAISSANCE AND REFORMATION. (3 hours.) From the fourteenth century to the reign of Louis XIV. Especial attention is paid to the lives and writings of the great leaders of that period. Sophomore year, second semester. T, Th, S, at 7:30. Assistant Professor Westergaard.

B21 and B22. ANCIENT ORIENTAL HISTORY. (3 hours each.) The beginnings of the earliest civilization and its development in Babylonia, Assyria, Egypt, Persia and Palestine. Sophomore year, both semesters. M, at 2:15; W, F, at 8:30. Professor Stearns.

C3. EUROPE IN THE EIGHTEENTH CENTURY. (3 hours.) Prerequisite: A course in English or Medieval history. This may be taken as a D course, in which case additional work will be required. Junior and Senior years, first semester. M, W, F, at 11:15. Assistant Professor Westergaard.

D4. EUROPE IN THE NINETEENTH CENTURY. (3 hours.) Prerequisite: History C3 or D3. Junior and Senior years, second semester. M, W, F, at 11:15. Assistant Professor Westergaard.

D5 and D6. AMERICAN HISTORY. (3 hours each.) Lectures will be given on the Westward movement of the American people.

the development of our social and economic institutions, and the history of political parties. The class makes careful studies of certain important topics. Junior and Senior years, first and second semesters. M, at 9:30; W, F, at 3:15. Assistant Professor Westergaard.

15. MODERN ASIATIC HISTORY. (3 hours.) A study of the life and institutions, chiefly of China and Japan; the changes under Western influences, and the various relations of Asia with America and Europe. If taken as a D course, additional work is required. Prerequisite: A course in English, Medieval or American History. Junior and Senior years, first semester. T, Th, S, at 9:30. Professor White.

16. HISTORY OF SPANISH AMERICA. (3 hours.) Through lectures and collateral reading, a study is made of the life, the social and political institutions, the economic development and the relations with Europe and America of the principal Spanish-American countries. Prerequisite: A course in English, Medieval or American History. Junior and Senior years, second semester. T, Th, S, at 9:30. Professor White.

For courses in Hebrew History, Early Christian History, History of Religion and History of Christianity, see under the Department of Biblical Literature.

CONSTITUTIONAL HISTORY

19. AMERICAN COLONIAL GOVERNMENT. (3 hours.) This course is a study with particular reference to the government and administration of the individual American colonies and settlements. The ground covered will be that of the French settlements, the Puritan colonies, Virginia, Maryland, and the Carolinas, the Middle colonies, the Dutch and Quaker colonies, Spanish and French settlements, and The Indians. This course is intended to prepare students for the later courses in American Constitutional History and Comparative Constitutional History. Sophomore and Junior years, first semester. T, Th, S, at 7:30. Professor Neely.

D9 and D10. COMPARATIVE CONSTITUTIONAL HISTORY. (3 hours each.) With the English Constitution as a basis, comparison of the constitutions of European and American States is made. This gives a fair knowledge of present-day governments. Junior and Senior years, both semesters. T, Th, S, at 8:30. Professor Neely.

D11 and D12. AMERICAN CONSTITUTIONAL HISTORY. (3 hours each.) In this course the principles of constitutional law are taught, constitutional questions discussed and constitutional cases examined. Prerequisite: A course in American History. Junior and Senior years, both semesters. (Not given in 1916-1917) Professor Neely.

LAW

B1 and B2. ELEMENTARY LAW. (3 hours each.) This course treats of the sources of law, common law, equity. A text book is used, also reported cases, combining the "text book method" with the "case system" of teaching law. Junior and Senior years, both semesters. M, at 1:15; W, F, at 7:30. Professor Neely.

C3 and C4. ELEMENTARY LAW AND CONTRACTS, PLEADING AND EVIDENCE. (3 hours each.) This course treats of the principles of common law, contracts, chancery, and code pleading by text books and from reported cases. Students are required to prepare written pleadings for examination, criticism and marking. Junior and Senior years, both semesters. T, Th, S, at 9:00. Professor Neely.

C17. AMERICAN DIPLOMACY. (3 hours.) A study is made in this course of the history of the foreign relations of the American Colonies under the Continental Congress, and an examination of the important treaties of the United States. Establishment of organization and history of the Department of State. Junior and Senior years, first semester. M, at 8:30; W, F, at 2:15. Professor Neely.

D18. INTERNATIONAL LAW. (3 hours.) In this course a study is made of the principles and rules of law that have been adopted for the conduct of international affairs by consenting nations.

Junior and Senior years, second semester. M, at 8:30; W, F, at 2:15. Professor Neely.

ECONOMICS AND SOCIOLOGY

B1 and B2. INTRODUCTION TO ECONOMICS. (3 hours each.) An elementary course which covers the entire field. Conducted for those desiring a general knowledge of the subject, it lays the foundation for specialization in the department. Sophomore and Junior years, both semesters. I, M, at 1:15; W, F, at 7:30; II, W, F, at 11:15. Professor Sumner and Mr. Mertzke.

B3. PRINCIPLES OF ECONOMICS. (3 hours.) A rapid survey of the field covered in Economics B1 and B2, intended to meet the needs of mature students, particularly those specializing in other fields. Junior and Senior years, first semester. (Not given in 1916-1917.) Professor Sumner.

C5. MONEY AND BANKING. (3 hours.) The history and theory of money and banking, especially in their bearing on the practical problems of today. Prerequisite: Economics B1 and B2. Junior and Senior years, first semester. M, at 2:15; W, F, at 8:30. Professor Sumner.

C6. PUBLIC FINANCE. (3 hours.) A study of taxation and other methods of meeting governmental expenditures in the light of both theory and practice. The budget, local and national taxation and public debts are among the subjects taken up. Prerequisite: Economics C5. Junior and Senior years, second semester. M, at 2:15; W, F, at 8:30. Professor Sumner.

D7. CORPORATION ECONOMICS. (3 hours.) A study of the growth of modern methods of large scale production and distribution. The benefits and dangers of monopolies and of trusts. Pools, trusts and other forms of combination considered, together with plans for their regulation. Junior and Senior years, first semester. M, at 3:15, W, F, at 9:30. Professor Sumner.

C8. PROBLEMS OF LABOR. (3 hours.) The factory system, modern organization of labor, woman and child labor, labor legislation, workingmen's insurance, and other appropriate problems.

Prerequisite: Economics B1 or B3. Junior and Senior years, second semester. T, Th, S, at 11:15. Professor Sumner.

D10. TRANSPORTATION. (3 hours.) A study of the principal problems involved in securing and regulating the land and water transportation of the United States. Normally follows Economics D7. Junior and Senior years, second semester. M, W, F, at 3:15; T, Th, S, at 9:30. Professor Sumner.

D19 and D20. APPLIED SOCIOLOGY. (1 hour each.) The work consists of first-hand study of local industrial and social problems, together with the reading and discussion of the latest literature treating of these subjects. Senior year, both semesters. W, at 1:15. Professor Sumner.

B21 and B22. ELEMENTS OF SOCIOLOGY. (3 hours each.) The development of society, its functions, institutions and forces. Illustrations are drawn from primitive society as well as from the America of today. Sophomore and Junior years, both semesters. I. T, Th, S, at 7:30. II. T, Th, S, at 9:30. Professors Sumner and Mr. Mertzke.

C25. POOR RELIEF. (3 hours.) An examination of the causes of pauperism and their remedy, the obligation of society and the methods of relief. Junior and Senior years, first semester. I. T, Th, S, at 8:30; II. T, Th, S, at 11:15. Mr. Mertzke.

C26. CRIMINOLOGY. (3 hours.) A study of crime from the social point of view, including its cause and the treatment of the criminal. Normally follows Economics C25. Junior and Senior years, second semester. T, Th, S, at 7:30. Professor Neely.

D27. THEORIES OF SOCIAL REFORM. (3 hours.) From Plato's Republic to Modern Socialism. The principal schemes, Utopian and scientific, for the radical change of social organization. Junior and Senior years, first semester. T, Th, S, at 8:30. Professor Sumner.

C28. CITY PROBLEMS. (3 hours.) The chief social and economic problems incident to modern city life. In addition to the general class work, each student is required to select some problem for special investigation. Junior and Senior years

second semester. T, Th, S, at 11:15. (May not be given 1916-17.) Professor Sumner.

30. IMMIGRATION. (3 hours.) A study of the causes and effects of immigration. Special emphasis is given to the present American issues. Junior and Senior years, second semester. Th, S, at 8:30. Professor Sumner.

Philosophy

PSYCHOLOGY AND EDUCATION

B1 or B2. ELEMENTS OF PSYCHOLOGY. (3 hours.) A general view of the field of psychology, its aim, methods, values, relations, and its application to practical conduct. Class and individual experiments to illustrate and supplement the text. Text-book, lectures, recitations and laboratory work. Required in first two courses. Sophomore or Junior year, either semester. First semester, I. M, at 2:15, W, F, at 8:30. II. M, at 3:15; W, F, at 9:30. Second semester, M, at 3:15; W, F, at 9:30. Professor Ewer.

B3 and C4. PRINCIPLES OF PSYCHOLOGY. (3 hours each.) This course is intended for those students who desire a more extended study of psychology along the lines of B1. More emphasis is placed upon the comparative study of different systems and upon the results of experimentation. Text-book, lectures, reports and laboratory work. Those who take this course fulfill the three-hour requirement in Psychology and get three hours in addition. Sophomore or Junior year, both semesters. T, Th, S, at 8:30. Professor Ewer.

C6. ADVANCED PSYCHOLOGY. (3 hours.) The subject of the course will change from year to year. For 1916-1917 it will be the Psychology of Suggestion, a study of the phenomena of suggestion in normal and abnormal individual and social life. Text-book, lectures, collateral reading and theses. Prerequisite: Psychology B1 or B3. Junior and Senior years, second semester. T, Th, S, at 2:15; W, F, at 8:30. Professor Ewer.

C7. EDUCATIONAL PSYCHOLOGY. (3 hours.) A course in the practical application of psychology to the educative process, the theories of the functions of education and the laws which govern the educative procedure. The topics are treated in the light of modern psychological and physiological investigations, and the course is intended for those going into the professions of teaching and the ministry. Text-book, lectures and assigned reading. Prerequisite: Philosophy B1. Junior and Senior years, first semester. T, Th, S, at 9:30. Professor Ewer.

C8. APPLICATIONS OF PSYCHOLOGY. (3 hours.) A study of the bearing of psychology on certain practical aspects of life, especially health and disease, work and recreation. Particular applications to the fields of business, law and the ministry will also be considered. Text-book, lectures and collateral reading. Prerequisite: Psychology B1 or B3. Junior and Senior years, second semester. T, Th, S, at 9:30. Professor Ewer.

C11 and C12. HISTORY OF EDUCATION. (3 hours each.) This course traces the methods and ideals of educational thought and practice as developed in various nations and periods. The problems and practices of the present receive special attention. Text-book and assigned readings. Junior and Senior years, both semesters. M, W, F, at 11:15. Professor Norton.

PHILOSOPHY

B21. LOGIC. (3 hours.) The course is designed to be an introduction to the essentials of reasoning. Stress is laid upon exercises in logical construction, the detection of fallacies, and upon conception and classification. Induction and deduction, their relations, as employed in scientific research. Text, recitations, lectures and written assignments. Sophomore and Junior years, first semester. M, at 2:15; W, F, at 8:30. Professor Park.

B23. THE ELEMENTS OF ETHICS. (3 hours.) The origin and development of moral ideas. The relation of these ideas and their development to civilization, with especial reference to the bearing upon the relation of the individual to society. The problems considered are those of goodness, evil, duty, freedom.

science, the nature of the self, and the supreme good. Lectures, required readings and theses. Prerequisite: Psychology or B2. Required of all not taking Philosophy C32. Junior year, first semester. T, Th, S, at 8:30. Professor Parker.

324. THE ELEMENTS OF ETHICS. (3 hours.) Same as Philosophy B23. Sophomore and Junior years, second semester. M, 3:15; W, F, at 9:30. Professor Parker.

325. ANCIENT AND MEDIEVAL PHILOSOPHY. (3 hours.) Lectures, readings of fragments of early Greek philosophers, and selected readings from the writings of Plato and Aristotle. An extended thesis treating of some fundamental problem of ancient philosophy. Text, Rogers' "A Student's History of Philosophy." Junior and Senior years, first semester. T, Th, S, at 11:15. Professor Parker.

326. MODERN PHILOSOPHY. (3 hours.) Lectures, and readings from Descartes, Leibniz, Locke, Hume, and Kant. A thesis dealing with some modern philosophical problem is required. Rogers' text. Rand's "Classical Philosophers." Reference is made to Royce's "The Spirit of Modern Philosophy," and to Whitehead's "The Persistent Problems of Philosophy." Junior and Senior years, second semester. T, Th, S, at 11:15. Professor Parker.

332. THE PRINCIPLES OF ETHICS. (3 hours.) A course designed for more advanced students of philosophy. May be substituted for Philosophy B23 by those students who make philosophy their major, and likewise by other students of approved preparation. May also be taken as an elective by students who have completed B23 with A grade. Lectures and theses. Junior and Senior years, second semester. T, Th, S, at 8:30. Professor Parker.

In keeping with the requirements of those who plan to become graduate students of Philosophy, certain courses are offered, one each semester, in which the spirit of independent research is encouraged, and methods of specialized study are within certain limits employed. Except by consent of the department, registration in these courses is limited to students whose major is

Philosophy. Prerequisites: Nine hours of Philosophy and Psychology, including C25 and C26.

D27. INTRODUCTION TO PHILOSOPHY. (3 hours.) The course is designed to familiarize the student with the outlines, divisions and methods of procedure in the several branches of philosophical inquiry. Junior and Senior years, first semester. (Not given in 1916-1917.) Professor Parker.

D28. METAPHYSICS. (3 hours.) An inquiry for the fundamental conceptions of philosophy. Junior and Senior years, second semester. (Not given in 1916-1917.) Professor Parker.

D29. PHILOSOPHY OF RELIGION. (3 hours.) The origin and nature of religion. Its development as a corollary of civilization through stages approaching to the level of revelation and redemption. These stages considered with especial reference to their illustration by the religion of Israel and its culmination in Christianity. Junior and Senior years, first semester. T, Th, at 7:30. Professor Parker.

D30. MODERN PHILOSOPHICAL PROBLEMS. (3 hours.) An effort to state the prominent tendencies in present-day thinking and to relate them to their proper historical sources. Junior and Senior years, second semester. T, Th, S, at 7:30. Professor Parker.

Summary of Students

November, 1916

Graduate Students	14
Seniors	102
Juniors	93
Sophomores	172
Freshmen	199
Special Students	8
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Total	598

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HOURS OF RECEPTION

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
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Pomona College

ANNUAL CATALOG 1917-1918

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Register of officers and teachers for the year
1917-1918; requirements for admission,
description of courses and general
information

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November 1917
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COLLEGE CALENDAR

1917

September 24, Monday	}	Registration Days. Monday and Tuesday, examinations for entrance
September 25, Tuesday		
September 26, Wednesday		
September 26, Wednesday		First Chapel Service, 10:30 a.m.
October 14, Sunday		Founders Day
Date to be chosen		Mountain Day
November 28, Wednesday		Thanksgiving Recess begins, 10:30 a. m.
December 3, Monday		Thanksgiving Recess ends, 10:30 a. m.
December 20, Thursday		Christmas Recess begins, 4:15 p. m.

1918

January 2, Wednesday		Christmas Recess ends, 10:30 a. m.
January 5, Saturday		Last day for choice of studies for the following Semester
January 23, Wednesday	}	Mid-year Examinations
to February 1, Friday		
January 28, Monday		Kinney Freshman Contest in Declamation, 8 p. m.
February 2, Saturday		Registration Day for Second Semester; Examinations for entrance
February 4, Monday		First Chapel Service
February 14, Thursday		Matriculation Day
February 22, Friday		Washington's Birthday
March 30, Saturday		Spring Recess begins, 10:30 a. m.
April 8, Monday		Spring Recess ends, 10:30 a. m.
Date to be chosen		Mountain Day
May 25, Saturday		Last day for choice of studies for the following Semester
May 30, Thursday		Memorial Day
June 5, Wednesday	}	Final Examinations
to June 14, Friday		
June 17, Monday		Commencement

SUMMER VACATION

September 23, Monday	}	Registration Days. Monday and Tuesday, examinations for entrance
September 24, Tuesday		
September 25, Wednesday		
September 25, Wednesday		First Chapel Service, 10:30 a.m.

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HISTORICAL SKETCH

The history of the development of Southern California from a land sparsely inhabited and apparently fit only for a cattle range, into a genuine American commonwealth with a multitude of prosperous communities, covers hardly forty years; but this brief span of time has been a period of intense activity and remarkable growth. This epoch of swift progress was inaugurated by the completion of a second transcontinental railway, in this case piercing Southern California directly from the East, together with the sudden dawning to a realization of the great agricultural possibilities of the section through irrigation. A rapid immigration and a swift increase in land values were at once induced. New towns sprang up almost in a day and great industrial enterprises characteristic of such a period were at once inaugurated.

While the commercial and speculative interests were conspicuously in evidence there were among the new settlers, nevertheless, many whose chief concern was for the higher qualities of life and character. Not least among these were those whose former affiliations had been with New England and its institutions. The Southern California District Association of Congregational Churches, meeting at San Bernardino in 1882, agitated the question of founding a college of New England type. In 1886 the Association met at Redlands (now Redlands), when the report of the educational committee was an earnest appeal for such a college. At this meeting a larger educational committee than usual was appointed and was instructed to view locations and make proposals of aid toward establishing a "Christian College of the New England Type." In accordance with these instructions the committee visited various places from which

they had received offers of aid and gave the matter serious and careful consideration.

In May, 1887, the District Association met in Los Angeles and became the General Association of Southern California. This General Association immediately gave full power to its committee of education, not only to select the College site, but to appoint trustees for the prospective institution. Fifteen trustees, three of whom are still members of the board, were duly appointed; the College was incorporated October 14, 1887, under the name of The Pomona College and a site was selected about four miles north of the center of Pomona.

For the immediate needs of the College a small private house was rented in Pomona, and in it the work of instruction was begun in September, 1888. In the following January an unfinished hotel in Claremont (now Sumner Hotel) together with considerable land adjacent, was given to the College and the work was transferred to that place. It was originally supposed that this location would be temporary; the name of the College was therefore retained in the expectation that ultimately the site originally selected would be used. Later this plan was abandoned and Claremont became the permanent seat of the College. By this time, however, the name of "Pomona College" had become so definitely fixed that it has been retained, notwithstanding the change of location.

The growth of the college has been swift and constant. The first class was graduated in 1894, at which time the total number of college students was forty-seven. For some time the work of the Preparatory School was of large importance but later on this was discontinued owing to the increased growth and importance of the College. In 1915 the College had become so large as to compel, at least a temporary 1

tion in the number of its students, the maximum of the Freshman Class being placed at two hundred, one hundred men and one hundred women. The original campus of about twelve acres has been enlarged by purchase and by gifts until it now comprises one hundred acres; and this area, together with its buildings, is being developed according to plans carefully worked out by competent landscape gardeners and architects, the whole growth being in accord with the harmonious plan. All this rapid progress of the institution has been made possible by a most generous company of friends who have responded nobly to the calls of higher Christian education and to the needs of young people. From the very beginning the institution has been the creation of sacrifice, affection and idealism. To a remarkable degree the College has been made possible by a great democracy of high-minded givers, and the character of these benefactors reflected in the daily life and procedure of the College.

While the College was originally Congregational in organization, it long ago made itself the servant of a wider fellowship. The Board of Trustees is a self-perpetuating body, absolutely free from ecclesiastical control and representing different communions, but obliged, nevertheless, by the College Charter to maintain the institution as truly Christian, though unsectarian. From the first it has been the policy of all concerned in the administration of the institution to maintain a high standard of college life and work, and to place the emphasis upon quality in the development of strong and serviceable Christian manhood and womanhood. Thus the purpose for which the College was founded is expressed in its motto, "Our Tribute to Christian Civilization."

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GEORGE W. MARSTON

ARTHUR M. DOLE

WILLIAM O. WARK

[In conjunction with a committee of the Faculty.

FACULTY

JAMES ARNOLD BLAISDELL

345 College A

*President, 1910**

B.A., Beloit College; M.A., Beloit College; D.D., Beloit College. Graduate Student, Hartford Theological Seminary.

CYRUS GRANDISON BALDWIN

Palo A

President Emeritus, 1890

B.A., Oberlin College; M.A., Oberlin College; Student, Andover Theological Seminary; D.D., Oberlin College.

EDWIN CLARENCE NORTON

137 W. Seventh

Dean of the Faculty and Professor of the Greek Language and Literature on the Edwin Clarence Norton Foundation, 1888

B.A., Amherst College; M.A., Amherst College and Yale University; Ph.D., Carleton College; D.D., Pacific Theological Seminary. Graduate Student, Johns Hopkins, Columbia and Oxford Universities.

FRANK PARKHURST BRACKETT

270 E. Third

Professor of Mathematics on the Frank Parkhurst Brackett Foundation and Director of the Observatory, 1888

B.A., Dartmouth College; M.A., Dartmouth College. Honorary Fellow, Clark University.

PHEBE ESTELLE SPALDING

261 W. Fifth

Professor of English Literature on the Phebe Estelle Spalding Foundation, 1889

B.L., Carleton College; M.L., Carleton College; Ph.D., Boston University.

DANIEL HERBERT COLCORD

157 E. Seventh

Professor of the Latin Language and Literature, 1890

B.A., Amherst College; M.A., Amherst College; B.D., Andover Theological Seminary. Graduate Student, Harvard University.

ARTHUR DART BISSELL

319 Harvard A

Professor of German, 1892

B.A., Amherst College; M.A., Amherst College; B.D., Yale University. Graduate Student, Yale University and University of Leipzig.

GEORGE GALE HITCHCOCK

721 College A

Professor of Physics, 1892

B.A., University of Nebraska. Graduate Student, Johns Hopkins and Cornell Universities.

*The date in each case denotes the beginning of original term of service.

GEORGE STEDMAN SUMNER 105 College Ave.
*Professor of Economics and Sociology on the Stedman-
 Sumner Foundation, 1897*

B.A., Pomona College; B.A., Yale University; Ph.D., Yale University.

CHARLES CUMMINGS STEARNS 146 E. Tenth St.
*Professor of Biblical History and Literature on the
 Nancy M. Lyon Foundation, 1906*

B.A., Yale University; M.A., Yale University; B.D., Union Theological
 Seminary. Graduate Student, University of Berlin.

CECELIA BERRY Sumner Hall
Dean of Women and Assistant Professor of Mathematics, 1909
 B.S., Mount Holyoke College; M. A., Mount Holyoke College.

FRANK ALEXANDER LYMAN 833 Indian Hill Blvd.
Professor of Chemistry, 1909

B.A., Beloit College; M.A., Beloit College; Ph.D., Johns Hopkins Uni-
 versity. Graduate Student, University of Chicago.

WILLIAM ERASTUS CHURCHILL 507 Yale Ave.
*Secretary of the Faculty and Associate Professor of
 German, 1902*

B.A., Knox College; MA., Knox College; Litt.D., Knox College; B.D.,
 Yale University. Graduate Student, University of Leipzig.

FRANK GARBUTT FRAMPTON 927 Harvard Ave.
Professor of the English Language, 1904

B.A., Illinois College; M.A., Illinois College; M.A., Harvard University.
 Graduate Student, Harvard and Chicago Universities.

CHARLES GRACCHUS NEELY 338 Harvard Ave.
Professor of Constitutional History and Law, 1911

B.L., University of Illinois.

WILLIAM ATWOOD HILTON 1264 Dartmouth Ave.
*Professor of Zoology on the Willard George Halstead
 Foundation, 1905*

B.S., Cornell University; Ph.D., Cornell University.

ELISABETH ALLEN PARKER 545 Indian Hill Blvd.
Professor of Philosophy, 1912

B.A., Kansas State Normal School; M.A., Harvard University; Ph.D.,
 Harvard University.

EDWARD CAPEN EWER 339 Yale Ave.
Professor of Psychology, 1916

B.A., Brown University; M.A., Brown University; Ph.D., Harvard Uni-
 versity.

RALPH HAINE LYMAN

357 W. Tenth St.

*Professor of Applied Music and Instructor in Singing,
Head of Department of Music, 1917*

B.A., Grinnell College. Student in voice with Karleton Hackett, William B. Olds, Grant Hadley, Arthur Middleton, Courtland Cooper, Holmes Cooper and other American masters, and with Vittorino Moratti in Berlin

CHARLES BERARD VOGDES

Claremont Int

Acting Professor of Military Science and Tactics, 1917

Graduate, United States Military Academy, West Point. Major U. S. A.
Retired.

WILLIAM POLK RUSSELL

506 E. Sixth St

*Associate Professor of Mathematics on the Joseph W. Fiske
Foundation, 1904*

B.A., Cumberland University; M.A., Cumberland University. Graduate Student, Columbia and Yale Universities.

MARO BEATH JONES*

Associate Professor of Romance Languages, 1911

B.A., Boston University. Graduate Student, Universities of Geneva and Barcelona. Student, Estudis Universitaris Catalans.

ARTHUR VOLNEY STOUGHTON

146 W. Seventh S

*Associate Professor of Physiology and Hygiene, and
College Physician, 1911*

B.A., Pomona College; M.D., Ohio Medical University. Graduate Student, Medical Department of Johns Hopkins University and Medical School of Harvard University. Student, Laboratories of Friedrichshain Krankenhaus and Private Laboratory of Professor Pick, Berlin. Resident physician, Protestant Hospital, Columbus, O.

HANNAH TEMPEST JENKINS

Claremont Int

Assistant Professor of Art and Design, 1905

Graduate Teachers College, Columbia University. Student Philadelphia Academy of Fine Arts. Pupil of Jean Paul Laurens, Constant and Pierre in figure and portrait, of Henry Thompson in landscape, and Wm. M. Chase, Robert Vonnoh and Cecilia Beaux in portrait. Painter, Salonist, 1889.

ROBERT TRESILIAN BELCHER

169 W. Sixth S

Assistant Professor of Mathematics and Engineering, 1907

B.A., Queen's University. Graduate Student, Queen's College and University of California.

WALTER ALFRED ALLEN

131 E. Tenth S

*Assistant Professor of Musical Theory and Appreciation,
and Instructor in Organ, 1912*

B.A., Beloit College; B.Mus., Yale University.

*Absent on leave, 1917-1918.

URA CHARLTON SQUIRE 248 W. Seventh St.
Assistant Professor of Physical Education for Women, 1910

B.A., Pomona College. Graduate Student, University of California and Wellesley College.

BERT MARTIN STAPLES Los Angeles
Assistant Professor of Violin, 1907

Pupil of Joachim and Dancla.

WARD PAYSON BARTLETT Claremont Inn
*Assistant Professor of Chemistry and Acting Dean
 of the College, 1909*

B.A., Dartmouth College; M.A., Harvard University; Ph.D., Harvard University; Graduate Student, Columbia University.

LIAM SHEFFIELD AMENT 135 E. Ninth St.
Assistant Professor of English, 1912

B.A., Oberlin College; M.A., Harvard University. Graduate Student, Columbia University.

TOR EDWARD MARRIOTT 116 Twelfth St.
Librarian, 1912

B.A., Beloit College; M.A., University of California. Graduate Student, Yale University.

ING OTIS PECKER Claremont Inn
Assistant Professor of Romance Languages, 1912

B.A., Boston University. Graduate Student, Boston University.

LIAM HOLLAND MATLOCK 246 Dartmouth Ave.
Assistant Professor of German, 1913

Ph.B., Drake University. Graduate Student, Goettingen, Heidelberg and Munich, the Sorbonne and College of France.

MER ELMER ROBBINS Harrison and Berkeley Ave.
Assistant Professor of Ancient Languages, 1915

B.A., University of Michigan; M.A., University of Michigan; Ph.D., University of Michigan. Graduate Student and holder of University and Buhl Classical Fellowships, University of Michigan.

LTER EARLE HARTLEY 143 E. Tenth St.
Assistant Professor of Organ and Piano, 1915

B.A., Yale University; B.Mus., Yale University. Associate, American Guild of Organists. Pupil of Widor in Organ and Composition, and of Stubbs.

IDEMAR CHRISTIAN WESTERGAARD Smiley Hall
*Assistant Professor of History on the Warren F. Day
 Foundation, 1916*

B.A., University of North Dakota; M.L., University of California; Ph.D., University of California. Fellow in History, Cornell University.

CARL PETER SCHOTT

238 W. Tenth S

Assistant Professor of Physical Education for Men, 1916

B.E., Nebraska State Normal School; B.P.E., Young Men's Christian Association College, Springfield, Massachusetts. Graduate Student, Purdue University.

EUGENE WHITE NIXON

219 W. Sixth S

Assistant Professor of Physical Training for Men, 1916

B.A., Monmouth College. Graduate Student, University of Illinois.

IRVING S. KULL*

Assistant Professor of American History, 1917

B.A., Beloit College; Graduate Student, University of Chicago.

PHILIP ALEXANDER MUNZ

140 E. Third S

Assistant Professor of Botany, 1917

B.A., University of Denver; M.A., University of Denver; Ph.D., Cornell University.

REGINALD POLE

Los Angeles

Director of Dramatics, 1916

B.A., Cambridge University.

MABLE CLAIR WEST

1016 Columbia A

Instructor in Piano, 1905

B.S., Pomona College. Graduate Student, Peabody Conservatory of Music, Baltimore.

HARRIET PASMORE

327 Harvard A

Instructor in Singing, 1914

B.A., University of California. Graduate Student, University of California.

ALFRED OSWALD WOODFORD†

639 Yale A

Instructor in Chemistry, 1915

B.A., Pomona College. Graduate Student, University of California.

FRANCIS CHARLES FLINT

Smiley E

Instructor in Chemistry, 1915

B.S., Pomona College. Fellow in Chemistry, Pomona College.

ARTHUR JOHN MERTZKE

Smiley E

Instructor in Economics and Sociology, 1916

B.A., University of Wisconsin. Graduate Student, University of Chicago.

KENNETH PERKINS

709 College A

Instructor in English and Dramatics, 1916

B.L., University of California; M.A., University of California.

*Second semester.

†Absent on leave, 1917-1918.

- TT OLDS WRIGHT 306 College Ave.
Instructor in Romance Languages, 1917
 A., Harvard University; B.D., Union Theological Seminary. Graduate
 student, Teachers' College, Columbia University.
- SYFERT BEATTY 345 College Ave.
Instructor in English and Secretary to the Administration, 1917
 A., Pomona College. Graduate Student, University of California.
- LD FRANKLIN HUMBERT 341 W. Sixth St.
Instructor in Forensics and English, 1917
 A., University of Oregon; B.A., Eugene Bible University.
- IA CLARICE SPEAR 346 Yale Ave.
Instructor in Physical Education, 1917

LECTURERS

- WILLIAM ORR WARK, B.A. Pomona
Theme: Biblical Literature
- HOWARD SPILMAN GALT, D.D. 1166 Columbia Ave.
(On the Henry D. Porter Foundation)
President of North China Union College
Theme: Changes in the Orient Viewed as Social Imitation

ADMINISTRATIVE OFFICERS OF THE FACULTY

- S ARNOLD BLAISDELL, D.D., *President*
 President's Rooms, Library
- N CLARENCE NORTON, PH.D., *Dean of the Faculty*
 Room 3, Holmes Hall
- RD PAYSON BARTLETT, PH.D., *Acting Dean of College*
 Room 9, Holmes Hall
- E ELLA BERRY, M.A., *Dean of Women*
 Sumner Hall
- N ERASTUS CHURCHILL, LITT.D., *Secretary of Faculty*
 Room 53, Library
- K PARKHURST BRACKETT, M.A., *Director of the Observatory*
 The Observatory
- AL GARBUTT FRAMPTON, M.A., *Acting Registrar*
 Rooms 7 and 8, Holmes Hall
- R EDWARD MARRIOTT, M.A., *Librarian*
 Library
- R ELMER ROBBINS, PH.D., *Chairman of Committee on Admission*
 Room 10, Holmes Hall

MARION JEANETTE EWING, B.A., *Assistant Librarian*

GEORGIA GRACE THOMAS,* *Assistant Registrar and Assistant Secretary of the Faculty*

IRENE SYFERT BEATTY, B.A., *Secretary to the Administration*

ROBERT JAMES BERNARD, B.A., *Assistant to the President*

President's Rooms, Lib

President's Rooms, Lib

ADVISERS

PROFESSOR J. A. LYMAN, Graduate Students

PROFESSOR BRACKETT, Senior Class

ASSISTANT PROFESSOR MATLOCK, Junior Class

PROFESSORS SUMNER AND EWER, Sophomore Class

PRESIDENT BLAISDELL, DEAN BERRY, ASSISTANT PROFESSOR ROBBINS
Freshman Class

PROFESSOR FRAMPTON, Special Students

PROFESSOR R. H. LYMAN, Department of Music

ASSISTANT PROFESSOR JENKINS, Department of Art and Design

OTHER OFFICERS

ERNEST EVERETT JONES, B.S., *Business Manager*

136 E. Nin

MARY LOUISE BILLINGS, *Accountant*

541 Harvard

SARAH LOUISE JEWELL, *Matron of Sumner Hall*

Sumner

FLORENCE MARIE FOX, *Assistant in the Registrar's Office*

Sumner

GRETCHEN HIGBEE, *Assistant to the Business Manager*

319 W. Six

DOROTHY LOUISE NEELY, B.A., *Assistant in the Library*

338 Harvard

BERNHARDT LOUIS BERGSTROM, *Manager of Student Activities*

Smiley

FOREST GLENN HUTCHISON, *Superintendent of Grounds*

CARL MAURITZ CARLSON, *Superintendent of Buildings*

922 Columbia

*Absent on leave.

COMMITTEES OF THE FACULTY

WITH PLACE AND TIME OF MEETING

BUILDINGS AND GROUNDS—(In conjunction with a committee of the Board of Trustees)—Messrs. Stearns, Hitchcock, Belcher. Room Library. On call.

CLASSIFICATION—Messrs. Frampton, Brackett, Sumner, Miss Berry, Messrs. Lyman, Matlock, Robbins. Room 8. 3:15 p. m., Friday.

ADMISSION—Messrs. Robbins, Brackett, Frampton. Room 10. On call.

COLLEGE LIFE—Messrs. Norton, Brackett, Sumner, Miss Berry, Messrs. Squire, Messrs. Churchill, Bartlett, Matlock, Robbins, Ewer, Lyman, Hartley. Room 9, 1:15 p. m., Friday.

PERSONAL RELATIONS—Mr. Bartlett, Miss Berry, Mr. Matlock, Messrs. Squire, Mr. Robbins. Room 9. On call.

COURSES OF STUDY—Messrs. Sumner, Frampton, Hilton, Pecker, Westergaard. Room 14, 9:30 a. m., Tuesday.

EDUCATIONAL EFFICIENCY—Messrs. Brackett, Neely, Lyman, Parker, Ewer, Ament. Room 51, 3:15 p. m., Monday.

FACULTY MEETINGS—Miss Berry, Messrs. Ewer, Marriott. Sumner Hall, 2:30 p. m., Monday.

FEDERATED CLUBS—Messrs. Pecker, Hilton, Brackett, Bissell, Perkins. Room 17. On call.

GRADUATE WORK—Messrs. Lyman, Bissell, Belcher, Ament. Room 57. Thursday. On call.

LIBRARY—Miss Spalding, Messrs. Marriott, Stoughton, Westergaard, Mertzke. Room 57. On call.

PHYSICAL EDUCATION—Messrs. Russell, Stoughton, Schott, Nixon, Bartlett, Miss Squire. Room 9, 10:30 a. m., Thursday.

PUBLICATIONS—Messrs. Churchill, Stearns, Hilton, Ament. Room 58. On call.

PUBLIC EVENTS AND LECTURES—Messrs. Churchill, R. H. Lyman, Flint, with Business Manager Jones. Room 53. On call.

RELIGIOUS INTERESTS—Messrs. Parker, Marriott, Matlock, Robbins. Room 58. On call.

ROOMS—Messrs. Sumner, Churchill, Bartlett, Room. 9. On call.

RULES—Messrs. Bartlett, Churchill, Frampton, Miss Berry. Room 58. On call.

STUDENT AID AND LABOR—Messrs. Bartlett, Marriott, Robbins. Room 9. On call.

SUMMER SCHOOL—Messrs. Bissell, Hilton, Russell. Room 5. On call.

CHARACTER OF THE COLLEGE

Pomona College is located at Claremont, on the San Fe and Pacific Electric Railways, thirty-five miles from Los Angeles. It is connected by the Pacific Electric Railway with Pomona, which is four miles distant, on the Salt Lake and the Southern Pacific roads. On the rim of an orchard covered valley, which is hemmed in on all sides by lofty mountains, and with Mt. San Antonio in the immediate background rising to the height of ten thousand feet, the situation is one of rare beauty. The genial southern climate invites to outdoor life and exercise the year around, while the deep canyons, the rushing streams and the long trails to the heart of the hills allure to the rewarding intimacies of nature. The town of Claremont, which now numbers about eighteen hundred inhabitants, owes its existence to the College, and has the attractive features of the typical college community. The location and situation, within easy reach of the great and growing metropolis of the Southwest, and yet in the quiet retirement of valley and hill, uniquely wholesome and stimulating in full measure of simplicity and thoughtfulness and all the best enthusiasms of which life is capable.

The College is pre-eminently a company of workers. From the very beginning it has maintained a reputation for interest in thorough scholarship rather than in large numbers. The procedures of the College are established in the purpose of appealing to students who appreciate the seriousness of the College opportunity. To this end, the standards of admission are unusually high. Not only is the number limited, but as defined elsewhere, only students who have finished their preparation with a high grade of promise are received. It is the distinct purpose to make the membership in the institution itself a scholastic honor. This inevitable

involves a sacrifice of certain values which would be temporarily pleasurable but which are not consistent with the most remunerative purposes.

It is the habit of the College to urge that scholarship should not only be high but also broad and inclusive. Pomona College is not a professional school. It insists that the best preparation for life includes not only the ample, generous and complete training of the college course, such as is here given, but also at a later period a thorough and definite professional specialization. It has farther insisted that this best and most complete training was practicable for a much larger number of young people than commonly feel that they have the resources of time and money for it. The college is eager to co-operate in the problems of such aspiring students; it has also been singularly successful in permeating its body of students with these ambitions, and the remarkable success of its graduates is due in no small degree to the fact that nearly seventy per cent of all who have graduated have taken subsequent professional training.

To the end that the College may be adequate for the broadest intellectual citizenship and service, a certain number of courses representing typically the differentiated fields of knowledge and investigation are required, and particular emphasis is laid upon those topics which relate to the history of thought, the organization of society and the bases of truth and righteousness. These courses are required of all, whether staying a longer or a shorter time in the institution, as being important to the main purpose for which the College exists. While these few courses are required, there is around them ample field for selection, according to the student's individual interest and purpose.

The College recognizes the fact that social training is also an essential part of education. It is believed that the co-edu-

cational character of the College greatly increases the culture of the student body in this respect. Working together on the highest levels of life, men and women are most likely to associate in mutual respect and dignity. It is practically the unanimous testimony of the graduates of this College that these relations add to the genuine wholesomeness and rounded worth of the student's life. While emphasizing social values and opportunities, the College, however, recognizes them as interests which must be held subordinate to the main business of study and work. For this reason limitations which sometimes may seem narrow are laid upon the social life of the college community. Fraternities and societies, in the ordinary acceptance of these terms, and extravagant social life, do not exist at Pomona College, and no one should seek the institution who is not willing to make sacrifice of some personal pleasures in the interests of the common college earnestness and simplicity.

Once more; the College is frankly Christian. It owes its origin and support to men and women of Christian idealism; it cannot, therefore, be other than loyal to these interests. Instead of maintaining a separate Christian life, the College also urgently lays upon its students the obligation of allegiance to that wider democracy of service and uplift which is represented in the Christian Church. The College is nevertheless, emphatically broad in its hospitality to modern thought. It holds that no student should go out of the College unaware of the throbbing questions of the day or unprepared to face the winds of free discussion; therefore, it welcomes all honest expression of opinion, putting faith in the power of truth to hold its own in the arena of open debate. It thus seeks to resource the coming generation with a leadership of intellectual capacity, directed will and Christian character.

DEGREES

BACHELOR OF ARTS

The courses of study offered by the College lead to the degree of Bachelor of Arts. These courses include certain required studies, but also a wide range of electives in language and literature, philosophy, economics, history, mathematics, science and fine arts. An average of fifteen hours of academic work per semester throughout the four years is required for the completion of the courses. A detailed statement of the curriculum will be found on page 36.

COURSES WITHOUT DEGREES

Graduate students, ordinarily only such as are at least twenty-one years of age, may be admitted as special students for courses for which by ability and preparation they may be qualified. Special students are not candidates for a degree, although completion of the prescribed courses in Music and Education entitles the student to receive the special State Teacher's Certificate upon the recommendation of the College.

MASTER OF ARTS

In a few departments, where the facilities of the College are so limited, a small number of students, whose undergraduate records show marked excellence, are accepted as candidates for the Master's degree. Only those are admitted who promise of contributing a definite and inspiring influence to the life of the College. Such residence is, therefore, required, as is deemed necessary to insure mutually helpful relations. A further statement of requirements will be found on page 40.

ADMISSION

GENERAL REQUIREMENTS AND METHODS OF ADMISSION

It is the purpose of Pomona College to do a distinctly notably high grade of work, thus preparing its graduates special distinction in whatever later callings they may choose. To this end candidates for admission to any class must present satisfactory evidence of their fitness for college, in character and in scholarship. Testimonials of character and a letter of honorable dismissal from the last institution attended are required. As all applications for admission are carefully scrutinized, delay in filing applications inevitably involves delay in acceptance.

The College welcomes tentative applications from prospective freshmen several years in advance and is glad to receive suggestions from time to time regarding the best preparation for admission. In this respect the good offices of the College are freely at the service of all interested inquirers. A medical examination conducted by an authorized physician under the direction of the Department of Physical Education, is required of all students.

ADMISSION TO FRESHMAN STANDING

Applicants are admitted to freshman standing in any one of three ways, as follows:

First: Examination by the College.

Students wishing to remove deficiencies by examination must do so before entering upon College work. Such examinations must be taken during the first three days of registration week of either semester or (by special arrangement) the week preceding the College commencement. They must be arranged for in advance through the Registrar.

Second: Certificate of the College Entrance Examination Board.

Examinations are given by the College Entrance Examination Board at certain times and places, which may be learned in the Registrar or from principals of secondary schools.

Third: Certificate from approved schools or colleges.

Students from approved schools or colleges are admitted without examination on presentation of a certificate signed by the principal or proper official and showing in detail the units completed courses. Certificate blanks obtained from the Chairman of the Committee on Admission, should be filled out and returned as early as possible after the completion of the high school year.

As the number of students admitted to the freshman class is limited, early application is advised. Applications are accepted in the order of their receipt, are considered individually and in every case must be accompanied by a certification as to scholarship and character. No application is considered which does not show fifteen units in accepted subjects, at least twelve of which are recommended. Special endorsement by the Principal must accompany all papers giving non-commended units, such endorsement to include specific recommendation of the candidate, both as to character and ability, for the undertaking of college work. No later than the first of February a notification is sent to those whose credentials are satisfactory and from time to time other applicants are so notified. No applicant, however, is finally enrolled among those definitely accepted, until a sum of \$17.50 has been deposited with the College as a payment on tuition. This sum is returned upon request received before the first of August, but not thereafter.

Those are matriculated to full standing who at the end of a semester's residence meet the requirements stated on page

120; those who do not meet the requirements are allowed to matriculate and are enrolled as in partial standing. No student in partial standing is recommended for college standing in another institution. The final acceptance of entrance units is based upon the character of the work done in class at Pomona College as well as upon the grade of the units presented.

ADMISSION TO ADVANCED STANDING

Students who have sufficient credit from other institutions are admitted to advanced standing on credentials signed by the proper officials and giving full specifications concerning the nature of the courses taken and the time spent in each, together with their rank in each subject. They are assigned hours and credits on the basis of their credentials, but this assignment is provisional until ratified by the Classification Committee. This ratification is not given until after the required semester's residence, at which time the Committee has power to act in adjusting hours or credits, or both, to the qualifications shown.

ADMISSION AS SPECIAL STUDENTS

Mature students, ordinarily only such as are at least twenty-one years of age, may be admitted as special students to courses for which, by ability and preparation, they may be fitted. This provision applies particularly to those equipped for advanced studies in special departments. The privilege of classification as special students is not open to those who seek admission to College in this way as a means of avoiding compliance with the entrance or collegiate requirements laid down for regular students. Special students are not candidates for a degree.

CREDITS FOR NON-COMMENDED WORK

Students who enter with some of their work non-commended may remove their deficiency in one of three ways—examination, by continuing the same line of study in College with high grade or by extra work in College not counted towards a degree. These three methods are more fully described as follows:

First: Students may be examined upon any of the accepted subjects presented for entrance, and upon passing with B grade receive credit toward entrance for that subject. Such examinations must be taken as specified on page 26.

Second: Entrance credit will be given for non-commended work after a student has completed with high grade two or more College courses in the same or a closely allied subject, or upon conditions laid down in individual cases by the Classification Committee.

Third: Entrance credit may be gained by work in certain College courses, but such courses cannot count toward the number of hours or credits required for graduation, nor for honors. Moreover, students may not substitute for subjects specifically required for entrance other subjects taken in this year.

Students are not candidates for a degree nor are they eligible for recommendation to college standing in another institution until they have been matriculated. (See page 120). Students are matriculated only after they have come into full standing. All students must be matriculated before attaining Junior standing.

COURSES REQUIRED FOR ADMISSION TO
FRESHMAN STANDING

In the following outline of courses a "unit" represents a course of study in one subject of high school grade involving

five forty-five minute recitations per week or an equivalent for a school year. Laboratory periods should be at least twice the length of recitation periods.

Not less than one unit in any subject is normally accepted though a half unit may be accepted when accompanied by units for courses in allied subjects.

SPECIFIC REQUIREMENTS—8 UNITS

English, 2 units	Algebra, 1 unit
History, 1 unit	Geometry, 1 unit
One foreign language, 2 units	*One third or fourth year laboratory science, 1 unit.

ADDITIONAL REQUIREMENTS—4 UNITS

Selected from the following:

English	Mathematics
History	*Laboratory Science
Foreign Language	

ELECTIVE—3 UNITS

It is recommended that these electives be chosen from the subjects specified above, but in view of the importance of other high school work credit is allowed for full units in other courses counted for high school graduation, the acceptance of which is specifically recommended by the principal of the school.

DESCRIPTION OF SUBJECTS

The College recommends that the work offered to meet the requirements above shall cover the ground indicated in the following description of courses. Each course constitutes one unit unless otherwise designated.

ENGLISH

- Elementary composition and literature. (2 units.)
- Intermediate.
- Advanced.

*Heads of Departments in which students wish to continue laboratory subjects begun in high school may, at their option, require the high school books to be submitted as evidence of ability to continue with more advanced work in the department.

The following list* is made the basis of examination. A indicates books selected for careful reading; B those requiring close study.

A. READING—From each of the following groups at least two selections are to be made, except as otherwise provided under Group I.

GROUP I. CLASSICS IN TRANSLATION.—The Old Testament, comprising at least the chief narrative episodes in Genesis, Exodus, Joshua, Judges, Samuel, Kings, and Daniel, together with the books of Ruth and Esther; the Odyssey, with the omission, if desired, of Books I-V and XV-XVII; the Iliad, with the omission, if desired, of Books XI, XIII-XV, XVII, and XXI; the Aeneid. The Aeneid, Odyssey, and the Iliad, should be read in English translations recognized literary excellence.

For any selection from this group a selection from any other group may be substituted.

GROUP II. SHAKESPEARE.—*Midsummer Night's Dream*; *Merchant of Venice*; *As You Like It*; *Twelfth Night*; *The Tempest*; *Romeo and Juliet*; *King John*; *Richard II*; *Richard III*; *Henry V*; *Coriolanus*, and the following if not chosen for study under B, *Julius Caesar*; *Macbeth*; *Hamlet*.

GROUP III. PROSE FICTION.—Malory's *Morte d'Arthur* (about 100 pages); Bunyan's *Pilgrim's Progress*, Part I; Swift's *Gulliver's Travels* (voyages to Lilliput and to Brobdingnag); Defoe's *Robinson Crusoe*, Part I; Goldsmith's *Vicar of Wakefield*; Frances Burnes's *Evelina*; Scott's *Novels*, any one; Jane Austen's *Novels*, any one; Maria Edgeworth's *Castle Rackrent*, or *The Absentee*; Dickens's *Novels*, any one; Thackeray's *Novels*, any one; George Eliot's *Novels*, any one; Mrs. Gaskell's *Cranford*; Kingsley's *Westward Ho!* or *Hereward, the Wake*; Reade's *The Cloister and the Hearth*; Blackmore's *Lorna Doone*; Hughes' *Tom Brown's Schooldays*; Stevenson's *Treasure Island*, or *Kidnapped*, or *Master of Ballantrae*; Cooper's *Novels*, any one; Poe's *Selected Tales*; Hawthorne's *The House of the Seven Gables*, or *Twice Told Tales*, or *Mosses from an Old Manse*; a collection of *Short Stories* by various standard writers.

*Recommended by the National Conference on Uniform Entrance Requirements in English for 1915-1919.

GROUP IV. ESSAYS, BIOGRAPHY, ETC.—Addison and Steele's *Sir Roger de Coverley Papers*, or *Selections from the Tatler Spectator* (about 200 pages); Boswell's *Selections from the Life of Johnson* (about 200 pages); Franklin's *Autobiography*; Irv's *Sketch Book* (about 200 pages), or *Life of Goldsmith*; Southey's *Life of Nelson*; Lamb's *Essays of Elia* (about 100 pages); Lamb's *Life of Scott* (about 200 pages); Thackeray's *Lectures on Swift, Addison, and Steele in the English Humorists*; Macaulay's *Lord Clive*, *Warren Hastings*, *Milton*, *Addison*, *Goldsmith*, *Franklin*, *Richard the Great*, *Madame d'Arblay* (any one); Trevelyan's *Life of Macaulay* (about 200 pages); Ruskin's *Sesame and Lilies*, or *Sermons* (about 150 pages); Dana's *Two Years Before the Mast*; *Selections from Lincoln*, including at least the two Inaugural Speeches in Independence Hall and at Gettysburg, the Last Public Address, and the Letter to Horace Greeley, together with a memoir or estimate of Lincoln; Parkman's *The Oregon Trail*; Thoreau's *Walden*; Lowell's *Selected Essays* (about 150 pages); Holmes' *The Autocrat of the Breakfast Table*; Stevenson's *Inland Voyage and Travels with a Donkey*; Huxley's *Autobiography* and selections from *Lay Sermons*, including the addresses on *Proving Natural Knowledge*, *A Liberal Education*, and *A Piece of Chalk*; a collection of *Essays* by Bacon, Lamb, DeQuincey, Hazlitt, Emerson, and later writers; a collection of *Letters* by various standard writers.

GROUP V. POETRY.—Palgrave's *Golden Treasury* (First Series, Books II and III, with special attention to Dryden, Collins, Cowper, and Burns; Palgrave's *Golden Treasury* (First Series, Book IV, with special attention to Wordsworth, Keats, and Shelley (if not chosen for study under B); Goldsmith's *The Traveller*; *The Deserted Village*; Pope's *The Rape of the Lock*; a collection of English and Scottish Ballads as, for example, some Robin Hood ballads, *The Battle of Otterburn*, *King Estmere*, *Young Bevis*, *Bewick and Grahame*, *Sir Patrick Spens*, and a selection from *Scottish ballads*; Coleridge's *The Ancient Mariner*, *Christabel* and *Lancelotti Khan*; Byron's *Childe Harold*, Canto III or IV, and the *Prisoner of Chillon*; Scott's *The Lady of the Lake*, or *Marmion*; Macaulay's *The Lays of Ancient Rome*, *The Battle of Naseby*, *The Armistice*; Tennyson's *The Princess* or *Gareth and Lynette*, *Lancelot and Elaine*, and *The Passing of Arthur*; Browning's *Caliban's Tunes*, *The Lost Leader*, *How They Brought the Good News*

ment to Aix, Home Thoughts from Abroad, Home Thoughts from the Sea, Incidents of the French Camp, Hervé Riel, Pheidippides, My Last Duchess, Up at a Villa—Down in a City, The Italian in England, The Patriot, The Pied Piper, "De Gustibus"—, Instans Irvannus; Arnold's Sohrab and Rostum, and The Forsaken Mermaid; Selections from American Poetry, with special attention to Poe, Lowell, Longfellow, and Whittier.

B. STUDY.—This part of the requirement is intended as a natural and logical continuation of the student's earlier reading, with greater stress laid upon form and style, the exact meaning of words and phrases, and the understanding of allusions. The books provided for study are arranged in four groups, from each of which one selection is to be made.

GROUP I. DRAMA.—Shakespeare's Julius Cæsar, or Macbeth, or Hamlet.

GROUP II. POETRY.—Milton's L'Allegro, Il Penseroso, and either Lycidas or Lycidas; Tennyson's The Coming of Arthur, The Holy Grail, and The Passing of Arthur; the selections from Wordsworth, Keats and Shelley in Book IV of Palgrave's Golden Treasury (First Series).

GROUP III. ORATORY.—Burke's Speech on Conciliation with America; Macaulay's Two Speeches on Copyright, and Lincoln's Speech at Cooper Union; Washington's Farewell Address, and Webster's First Bunker Hill Oration.

GROUP IV. ESSAYS.—Carlyle's Essays on Burns, with a selection from Burns' Poems; Macaulay's Life of Johnson; Emerson's Essay in Manners.

HISTORY

Ancient History to the Coronation of Charlemagne with special reference to the history of Greece and Rome. (Myer's Ancient History or equivalent.)

Mediaeval and Modern History, a year's work based on a textbook, but including reference reading and note-book work. (Myer's Middle Ages and Myer's Modern Age or equivalent.)

English History, including text, reference and note-book work for one year. (Andrew's History of England or equivalent.)

United States History and Civil Government. (Channing's Student's History and Ashley's Federal State or equivalent.)

GREEK

Greek lessons and grammar.

Xenophon, four books of the Anabasis, and composition.

Homer, three books of the Iliad, with prosody; ability to read easy Greek at sight.

LATIN

Latin lessons and grammar.

Cæsar, Commentaries (Books I-IV).

Cicero, seven orations, including those against Catiline and the poet Archias, and the Manilian Law.

Virgil, six books of the Aeneid and prosody.

Grammar, composition and sight reading are required as a portion of each year's work.

FRENCH

Elementary. One year of French; elements of grammar; ability to write at dictation and to translate from English; reading of about one hundred and fifty pages of text.

Intermediate. Additional work in French, amounting to one year's advanced work in translation and composition.

Advanced. The ability to read at sight any piece of modern prose or poetry and to write in French a paper on an assigned subject.

GERMAN

Elementary. One year of German, elements of grammar; ability to write at dictation and to translate from English; reading of about one hundred and fifty pages of text.

Intermediate. Additional work in German amounting to one year's advanced work in translation and composition.

Advanced. The ability to read at sight any piece of modern German prose of moderate difficulty and to write in German a paper on an assigned topic.

SPANISH

Spanish (1 or 2 units). Including an accurate knowledge of the essentials of grammar, ability to write ordinary Spanish and to read ordinary Spanish prose.

MATHEMATICS

Elements of Algebra, with special attention to factoring and solution of equations, and including ratio and proportion.

Algebra ($\frac{1}{2}$ unit), being a continuation of the course in the elements of Algebra with special emphasis on algebraic theory.

Algebra ($\frac{1}{2}$ unit). Quadratics and indeterminate equations, irrational and imaginary numbers, ratio, proportion and variations, in review; also theory of exponents, progressions, undetermined coefficients and logarithms.

Plane Geometry, with original exercises and problems.

Solid Geometry ($\frac{1}{2}$ unit). With original exercises and problems.

Trigonometry ($\frac{1}{2}$ unit). Elementary course in plane trigonometry.

PHYSICAL AND BIOLOGICAL SCIENCES

Physics, covering an elementary knowledge of dynamics, sound, light, heat, magnetism and electricity; recitation and laboratory work.

Chemistry, including classroom and laboratory work in the elements of chemistry as presented in modern standard text-books on the subject. At least five exercises a week for one year.

Physical Geography, covering the descriptive and explanatory study of the commoner phenomena of nature, including satisfactory laboratory and field work.

Botany, covering the morphology and simpler physiology of the higher plants, including some acquaintance with the local flora.

Zoology, emphasizing scientific methods and training.

EXTRA ENTRANCE CREDITS

If by examination or by certificate, a student presents more than fifteen units of commended work for admission he may, after the lapse of a semester and upon formal application, receive college credit for certain subjects, provided that these subjects, or others closely allied, have been continued in college with high grade, one unit of commended work being allowed three hours of college credit. Extra credit is thus allowed only in foreign language, advanced mathematics and advanced science. Credit, varying in amount with the individual courses, is granted for graduate work in approved high schools.

CURRICULUM

DEGREE OF BACHELOR OF ARTS

The courses of study offered lead to the degree of Bachelor of Arts under the following hour and credit requirements:

HOUR REQUIREMENTS

One hundred and twenty-six hours of work are required for graduation. An "hour" consists of one recitation or lecture period, or one laboratory period a week for a semester. A recitation or lecture period covers fifty-minutes; a laboratory period covers, in general, the time of three such periods. Six hours of the one hundred and twenty-six are in Physical Education. In order to complete the course in four years one must take an average of fifty-two hours of academic work per semester throughout the four years.

CREDIT REQUIREMENTS

In order to graduate a student must not only earn a certain number of hours, but also attain an average grade of at least B in those hours. To this end a certain number of credits is ascribed to each grade as a basis for determining average grade. The scale is so adjusted that the number of credits required for graduation coincides with the number of hours. Details regarding credits are published in the "Manual of Procedure."

CHOICE OF SUBJECTS

In the selection of his work the student is given a large range of choice. The only limitations are such as will insure to him, on the one hand, the breadth of view which may

ined by an introductory study of each of the great realms of knowledge; and, on the other, that concentration along one chosen line of work which shall develop power of thought and an actual fund of knowledge in some particular field. To this end there are certain subject requirements as stated below. The College would emphasize also, the advisability of selecting work representing each of the following broad groups of subjects:

1. Language, Literature and Fine Arts.
2. Mathematics, Physical and Biological Sciences.
3. History, Social Sciences and Philosophy.

SUBJECT REQUIREMENTS

English Composition—4 hours, Freshman year.

English Literature—6 hours, Freshman or Sophomore year.

French or German—12 hours, Freshman and Sophomore years.

History—6 hours, Freshman or Sophomore year, except for those who enter with credit for three units of History.

Mathematics—6 hours, ordinarily Freshman year, except for those who enter with credit for three units of Mathematics. Such may substitute a year of work in science for the required mathematics; this science may be used to meet the requirement in science immediately following.

Physics, Chemistry, Zoology, Botany or Physiology—6 hours, Freshman or Sophomore year. A student who enters with only one unit of science must take 6 hours of another line of science and, in general, it is expected that one will take in college at least 6 hours in science in a different line from any presented for entrance.

Physical Education and Military Training—4 hours in Freshman and Sophomore years and 2 hours in Junior and Senior years.

Economics—6 hours, usually Sophomore or Junior year

Philosophy and Psychology—6 hours, Sophomore
Junior year.

In addition to these requirements, there is a general requirement of 36 hours of C and D work, of which at least 9 must be D work.

Students who have shown special ability in one line of work may, with the consent of the head of the department, enroll for a departmental major. This major includes usually, at least 18 hours in the department chosen, together with certain courses in allied subjects, and usually a reading knowledge of French and German. The student plans his work in consultation with the head of the department as well as with his class adviser. Certain prerequisites, different with the subject chosen, are indicated for each major. A final examination or thesis or both may be required.

Students who desire to become candidates for a departmental major should indicate such intention as early as possible, and must be registered as candidates for such a departmental major not later than the first week of registration in their Senior year.

The student who completes a departmental major receives in addition to his diploma the special commendation of the department.

COURSES IN MUSIC AND ART

The College is equipped to offer unusual privileges in the Departments of Art and of Theoretical and Applied Music. The influence of the College is greatly enriched by the contributions made through these departments to the cultural life of the institution as a whole. In Bridges Hall the g

musicians of the world are heard, all students being supplied with admission to their concerts. Great enlargement of life comes through intimate acquaintance with these arts, both in theoretical and applied forms, and the College urges all regular students to include them, at least to some degree, in their liberal courses, credit toward the B.A. degree being granted on conditions specified under the detailed description of the courses.

TEACHERS' CERTIFICATES IN MUSIC AND ART

The College is authorized by the State Board of Education to issue to individuals who complete a prescribed course of study, credentials entitling them to a certificate to teach music or art in the public elementary and secondary schools of the State of California.

Candidates for the B.A. degree may also be candidates for such certification, but they must ordinarily expect to spend three years in attaining the two, in view of the standards of proficiency required, the practice demands and the practical teaching. Detailed information may be had on application.

SUMMER SESSION

The Summer Session affords opportunity to undergraduate students, especially, but also to high school teachers and others, to pursue work for credit in various departments. The Department of Zoology conducts its work at the Laguna Beach Marine Laboratory, Professor W. A. Hilton, Director. Other departments meet jointly in the College buildings at Claremont. The session opens immediately after Commencement and continues for six weeks.

MUSIC AND LECTURE COURSE

In order to insure to the entire student body the opportunity of hearing and seeing the great artists of the world whose public appearance is usually confined to the large cities, the College introduces each year a group of the most distinguished masters in the various departments of achievement. For the lectures, concerts and other entertainments thus afforded an annual ticket is furnished to every student.

DEGREE OF MASTER OF ARTS

While Pomona College lays the main emphasis on undergraduate work, in certain departments where the library and laboratory facilities are adequate, and where the time of the instructors permits, students whose undergraduate record shows of such excellence as to warrant their being made exceptions may be admitted as candidates for the degree of Master of Arts. Such students should consult with the chairman of the Committee on Graduate Work as to the special requirements which will be made in their cases. In addition to the presentation of a thesis, twenty hours of work are required for the higher degree. The twenty hours are divided between a major subject and a minor subject, in the same or in a closely allied department. No elementary undergraduate work may be counted, and not less than six hours must be of a strictly graduate character. The requirements may usually be met in one year of regular work, but of students in partial attendance a longer time is required.

COURSES WITHOUT DEGREES

In exceptional cases mature students who desire to receive instruction in courses not leading to a degree will be admitted provided they give evidence of their fitness for such work.

LECTURES

THE JOSEPH H. JOHNSON FOUNDATION

The Joseph H. Johnson Foundation, liberally endowed by Miss Ellen B. Scripps, provides an annual income for the purpose of furnishing to the College for a protracted stay and intimate participation in college life notable educators from other institutions. By this means such educators are annually in residence in Pomona College. The opportunity of intimate contact with distinguished instructors thus afforded to undergraduates is a unique privilege, often surpassing the privileges of the classroom of the institution from which these educators come.

THE HENRY D. PORTER FOUNDATION

The Henry D. Porter Foundation, named in honor of the late Rev. Henry D. Porter, for many years a missionary in China, secures to the institution annually, the extended stay of some prominent worker in the field of Christian Missions. The lecturer upon this foundation commonly shares in the regular class room work related to the history, geography, politics or religion of the region in which he has been actively at work. This vivid representation of the missionary life is one of the most stimulating features in the spiritual program of the College.

CURRICULUM

An outline of the work which leads to graduation is here given by years. Following this scheme is a list of the definite courses from which the work may be chosen. A more complete description of each course may be found under "Departments of Instruction."

Each "hour" represents one recitation or laboratory period per week for one semester.

FRESHMAN YEAR

Hygiene	2 ho
Physical Education and Military Training.....	2 ho
English Composition.....	4 ho
French or German.....	6 ho
History ¹ or English Literature ² , or Greek, or Latin.....	6 ho
Mathematics ³	6 ho
Elective from the above or from Art, Bible, Biology, Chem- istry, Engineering, English, Music or Physics.....	6 ho

SOPHOMORE YEAR

Physical Education and Military Training.....	2 ho
French or German ⁴	6 ho
English Literature ² or History ¹	6 ho
Physics, Chemistry, Botany, Physiology or Zoology ⁴	6 ho
Elective from the above or from Art, Bible, Engineering, Economics and Sociology ⁵ , Mathematics, Music, Psychology and Philosophy ⁵ or Spanish.....	12 ho

JUNIOR AND SENIOR YEARS

Physical Education.....	2 ho
Economics and Sociology ⁷	6 ho
Philosophy and Psychology ⁷	6 ho
Elective	48 ho

LIST OF COURSES*

Open to Freshmen (and Sophomores)

Art A1-A2, Elementary Course (6).

Biblical Literature A1 and A2, Contents of the Bible (2).

Biology A1-A2, General Biology (6).

¹Must be taken in Freshman or Sophomore year, unless 3 units of History have been accepted for entrance.

²Must be taken in Freshman or Sophomore year.

³Must continue any language begun in Freshman year.

⁴Unless the Science requirement was met Freshman year.

⁵Since 6 hours each of Economics and Sociology, and of Psychology and Philosophy must be taken during the course, it is recommended that one of these be elected in Sophomore year.

⁶A science may be substituted, if 3 recommended units of Mathematics have been presented for entrance; this may be counted as fulfilling the general science requirement.

⁷Unless already taken.

*Courses connected by a dash may be taken separately; those connected by "and" are to be taken consecutively.

- Chemistry A1 or A2, Elements of Chemistry (4).
 A3 or A4, Systematic Chemistry of the Metals (3).
 B5 or B6, Systematic Chemistry of the Non-Metals (3).
 B31 or B32, Inorganic Preparations (1).
 B33 or B34, Qualitative Analysis (2).
 B35 or B36, Qualitative Analysis (2).
 Engineering A1 and A2, Graphics (4).
 English A1 and A2, American Literature (6).
 A21 and A22, Composition (4).
 A3 and A4, Historical Survey of English Literature (6).
 A35 and A36, Elementary Public Address (4).
 B3 and B4, Development of English Literature (6).
 B3a, Mediaeval Literature (3).
 French A1 and A2, Elementary Course; Modern Prose and Drama (6).
 B3-C4, Nineteenth Century Novel (6).
 B3' and C4', Composition (4).
 German A1 and A2, Elementary Course (6).
 A13 and B14, Intermediate Course (6).
 B1' and B2', Composition (2).
 B3, Prose Narrative and Drama (3).
 B4, Schiller (3).
 B3' and B4', More Advanced Composition (2).
 C19-C20, Advanced German Prose (6).
 Greek B1 and B2, Elementary Greek (6).
 B3-B4, Lysias; Plato (6).
 B3' and B4', Composition (2).
 History B7-B8, English History (6).
 A17 and A18, General European History (6).
 B13 and B14, Ancient Classical (6).
 B25, Contemporary Problems (2 hours).
 Latin A1 and A2, Elementary Latin (6).
 A3 and A4, Vergil; Cicero (6).
 B5-B6, Cicero and Livy; Horace (6).
 B5' and B6', Composition (2).
 Mathematics A1, Solid Geometry; A2, Plane Trigonometry (6).
 A3-B4, Algebra (6).
 A5 and A6, Elementary Analysis (6).
 A9-A10, Algebra; Trigonometry (6).
 B7-B8, Analytic Geometry and Calculus (6).

Military Training A1 and A2, Drill (2).

Music A1 and A2, Elementary Course (4).

Physical Education A1 and A2, Gymnastics (1).

A11 and A12, Gymnasium Practice (1).

A11' and A12', Outdoor Sports (1).

B19 and B20, Folk and National Dances (1).

Physics B1 and B2, Mechanics and Sound; Heat, Magnetism, Electricity and Light (8).

Physiology A1 and A2, Applied Physiology and Hygiene (2).

LIST OF COURSES

Open to Sophomores (and Upperclassmen)

All B courses listed above and such A courses as are permitted by the classification adviser.

Art B3-B4, Still Life, Perspective, Composition (6).

Biblical Literature B3, Preservation and Transmission of the Testament (1).

B4, Preservation and Transmission of the New Testament

B21-B22, Ancient Oriental History and Literature (6)*.

Botany B21-B22, General Botany (6).

Chemistry C7-C8, Elementary Quantitative Analysis (6).

C9 and C10, Systematic Organic Chemistry (6).

Economics B1 and B2, Introduction to Economics (6).

B21 and B22, Elements of Sociology (6).

Engineering B3 and B4, Graphics (4).

C11 and C12, Surveying (6).

English B3 and B4, Development of English Literature (6).

B3a, Mediaeval Literature (3).

B23, Composition (3).

B24a and B24b, Composition (4).

C28, Short Story (3).

B31, Argumentation (3).

B32, Public Address (3).

*Not given in 1917-1918.

- ology B2, Dynamic and Structural Geology (3).*
 rman C9-C10, Nineteenth Century Novel (6).
 C9' and C10', Composition and Conversation (2).
 eek B13 and B14, Greek Literature and Life (6).
 C5-C6, Aeschylus and Sophocles; Demosthenes (6).
 story B1-B2, Mediaeval; the Renaissance and Reformation (6).*
 B19, American Colonial Government (3).*
 B25, Contemporary Problems (2 hours).
 tin C7-C8, Pliny; Plautus (6).
 C7' and C8', More Advanced Composition (2).
 thematics B13-B14, Analytic Geometry and Calculus (6).
 B15, Spherical Trigonometry (2).*
 C15-C16, Descriptive Geometry and Perspective (6).*
 C17-C18, Advanced Analytic Geometry and Calculus (6).*
 ilitary Training B3 and B4, Drill (2).
 B13 and B14, Military Science (4).
 sic B3 and B4, History and Appreciation (6).
 B5 and B6, Harmony (6).
 ilosophy B21-B23 or B24, Logic and Ethics (6).
 ysical Education B3 and B4, Advanced Gymnastics (1).
 B13 and B14, Gymnasium Practice (1).
 B13' and B14', Outdoor Sports (1).
 B19 and B20, Folk and National Dances (1).
 ysics C3-D4, Mechanics of Solids and Fluids; Heat, Sound and
 Light (6).
 ysiology B3 and B4, Anatomy and Physiology (6).
 ychology B1 or B2, Elements of Psychology (3).
 B3 and C4, Principles of Psychology (6).
 nish B21-B22, Elementary Course; Modern Prose and Drama (6).
 ology B11-B12, General Zoology; Vertebrate Zoology (6).
 B18, Entomology (3).
 C31-C32, Systematic Invertebrate Zoology; Systematic Verte-
 brate Zoology (6).

*Not given in 1917-1918.

LIST OF COURSES†

Open to Seniors and Juniors

Art B11, History of Art (3).

B12, History of Art (3).

C5-C6, Anatomy; Drawing from Life (6).

B9 and B10, Art Appreciation (2).

D7-D8, Figure from Life in Charcoal; Head from Life in Oil (6).

Astronomy B1 and C2, General Astronomy (6).

C3-D4, Descriptive; Theoretical and Practical (6).

D6, Astrophysics (3).*

Biblical Literature C5-C6, Old Testament Introduction; New Testament Introduction (2).

C7 and C8, The Teachings of Jesus (2).

C23-C24, Hebrew History and Literature;* Early Christian History and Literature (6).

C28, Christian Missions (3).*

C25-C26, History of Religions; History of Christianity (6).

C31-C32, Hebrew Grammar; Hebrew Readings (6).

C33, Poetry of the Bible (3).*

D42, Semitic Customs and Culture (3).

Botany C23, Plant Physiology (3).*

C24, Sub-tropical Horticulture (2).*

C25-D26, Mycology; Pathology (6).

D27-D28, Advanced Botany (6).

C30, Plant Propagation (3).*

D29, General Morphology (3).

D31 and D32, Special Mycology (6).

Chemistry C7-C8, Elementary Quantitative Analysis (6).

C9 and C10, Systematic Organic Chemistry (6).

C15 and C16, Agricultural Chemistry (6).

C11 and C12, Mineral Chemistry (6).*

D13, Advanced Organic Chemistry (3).

D14, Elements of Physiological Chemistry (3).

D17, Advanced Quantitative Analysis (3).

D18, Advanced Quantitative Analysis (3).

D19 and D20, Chemistry Conference (2).

D21 and D22, Physical Chemistry (6).

D23-D24, Advanced Laboratory Investigation and Research.

*Not given in 1917-1918.

†In addition to above courses.

stitutional History D9 and D10, Comparative Constitutional History (6).*

B19, American Colonial Government (3).*

D11 and D12, American Constitutional History (6).

D17 and D18, Pro-seminar in History (2).

conomics and Sociology B3, Principles of Economics (3).*

C5-C6, Money and Banking;* Public Finance (6).

C8, Problems of Labor (3).

C9, Corporation Finance (3).

D7, Trust Problems (3).

D10, Transportation (3).

D19 and D20, Applied Sociology (2).

C25-D26, Poor Relief; Criminology* (6).

D27-C28, Theories of Social Reform; City Problems (6).

C29, Statistics (3).

D30, Immigration (3).

ineering D13 and D14, Applied Mechanics (6).

lish D5-D6, Shakespeare's Comedies and Early Tragedies;

Shakespeare's Later Tragedies and Romances (6).*

C7-C8, The English Essay; the English Novel (6).

C9-C10, English Poetry of the Seventeenth and Eighteenth Centuries; Poetics; English Poetry of Romantic Periods (6).

D11, History of the English Drama to 1642 (3).

D12, English Drama from 1660 to the present (3).

D15, Shakespeare's English Chronicle and Greek and Latin Plays (3).

D16, Shakespeare's Representative Dramas. Seminar (3).

C25, Essay (3).*

C26, Journalism (3).

D27-C28, Literary Criticism*; the Short Story (6).

C33, Advanced Argumentation (3).

C34, Practical Public Speaking (3).

C41-D42, Anglo-Saxon; Beowulf (6).

D44, Chaucer (3).

C19, English Poetry of Victorian Age (3).*

D20, Present Day English Poetry (3).*

D29, Writing of Plays (3).

D30, Composition Seminar (3).*

Not given in 1917-1918.

- French D5-D6, Classic Drama; Prose of the Seventeenth Century (6).*
- D7-D8, Literature of the Eighteenth Century; Romanticism (6).*
- D7' and D8', Phonetics; Advanced Composition and Conversation (4).
- D9-D10, Contemporary French Novel (6).
- Geology C3, Paleontology (3).*
- German C9-C10, Novel of the Nineteenth Century (6).
- C9' and C10', Composition and Conversation (2).
- D5-D6, Lessing, Goethe (6).*
- D7-D8, History of German Literature to Lessing; from Lessing to Goethe (6).*
- C11-D12, Scientific German; Composition (6).
- D17, Modern Drama (3).
- D18, Modern Fiction (3).
- Greek C7-D8, Hellenistic Greek; Homer (6).
- D9-D10, Plato; Thucydides (6).*
- D11 and D12, Composition and Sight Reading (2).*
- History C3-D4, Europe in the Eighteenth Century; Europe in the Nineteenth Century (6).
- D5 and D6, American Social and Political History (6).
- C15-C16, Modern Asiatic History; History of Spanish America (6).*
- D9 and D10, Comparative Constitutional History (6).*
- D11 and D12, American Constitutional History (6).
- D17 and D18, Pro-seminar (2).
- Italian B31-B32, Elementary (6).*
- C33-D34, Classics (6).*
- Latin D-9-D10, Cicero; Catullus, Lucretius, Tibullus, Propertius, Ovid and Lucan (6).*
- D11-D12, Tacitus; Vergil (6).
- D13 and D14, Composition (2).
- D15 and D16, Special Latin (6).
- Law B1 and B2, Elementary Law (6).
- C3 and C4, Elementary Law, Pleading, Evidence (6).
- C17, American Diplomacy (3).
- D18, International Law (3).*

*Not given in 1917-1918.

Mathematics C17-C18, Advanced Analytic Geometry and Calculus (6).

C19, Differential and Integral Calculus (3).

D20, Theory of Equations (3).*

D21 and D22, Higher Analysis (6).*

D24, Differential Equations (3).

D25 and D26, Analytic Mechanics (6).*

D27 and D28, Projective Geometry (6).

Military Training B5 and B6, Drill (2).

B13 and B14, Military Science (4).

Music C7 and C8, Composition I (6).

D9 and D10, Composition II (6).

C12, Musical Appreciation (3).*

C13, Orchestration (3).

Philosophy C25-C26, Ancient and Medieval Philosophy; Modern Philosophy (6).

D27-D28, Introduction to Philosophy; Metaphysics (6).

C32, Principles of Ethics (3).

D29-D30, Philosophy of Religions; Modern Philosophical Problems (6).*

Physical Education C5 and C6, Sports (1).

C15 and C16, Sports (1).

C7 and C8, Sports (1).

C17 and C18, Sports (1).

C21 and C22, Folk and National Dances (1).

C23 and C24, Aesthetic Dances (1).

C25 and C26, Gymnasium Practice (1).

C31 and C32, Theory of Athletics (4).

C33 and C34, Playground Methods (4).

Physics C3-D4, Mechanics of Solids and Fluids; Heat, Sound and Light (6).

D5 and D6, Magnetism and Electricity (6).*

C9 and C10, Physical Measurements (3).*

D11, Advanced Magnetism and Electricity (4).

Physiology D5-D6, Histology (6).

B11 and B12, Public Hygiene.

B13 and B14, Problems of Heredity and Eugenics.

D7-D8, Embryology (6).*

*Not given in 1917-1918.

Psychology D6, Advanced Psychology (3).*

C7-C8, Educational Psychology; Applications of Psychology (6).

C11 and C12, History of Education (6).

D12, Social Psychology (3).

Spanish C23-C24, Contemporary Spanish Novel (6).

C23' and C24', Composition and Commercial Correspondence (2).

D25-D26, Classic Drama; Prose of the Sixteenth and Seventeenth Centuries (6).

D27 and D28, Contemporary Literature (2).

Zoology C31-C32, Systematic Invertebrate Zoology; Systematic Vertebrate Zoology (6).

C13-D14, Advanced Zoology; Bionomics (5 or 6).

D15 or D16, Advanced Zoology (3).

D19 and D20, Special Entomology (6).

D33, Comparative Neurology (3).

*Not given in 1917-1918.

COURSES OF INSTRUCTION

DESIGNATION OF COURSES

The letter preceding the number in the designation of a course indicates in general its grade. Elementary courses, designated by A (Greek A1) are given in Freshman or Sophomore year; B courses are either those which follow the A courses of earlier years or the more advanced beginning courses; C and D courses are advanced courses given to Juniors and Seniors, D courses being the more difficult. The natural sequence of courses is from A to B, B to C, and C to D, and a student may not enter a C or D course without previous work in the same line.

To pass from an A course to a C course or from a B course to a D course requires a grade of A in the more elementary course.

Seniors may elect an A course only by permission of the Classification Committee, and with a discount of hours.

Odd numbered courses, as A1, come the first semester, even numbered courses, as A2, the second semester.

Any course may be withdrawn if the enrollment is less than five.

The Roman numeral immediately preceding the teacher's name shows the period of recitation, as follows:

	7:30	8:30	9:30	11:15
W, F.....	I	III	V	VII
Th, S.....	II	IV	VI	VIII
	1:15	2:15	3:15	
W, F.....	IX	XI	XIII	
Th.....	X	XII	XIV	

When no Roman numeral is found, the course is offered but at the student's request may be arranged with the teacher. When the numeral is preceded by a letter or letters, the class meets only on the day designated.

ART

Credit is given toward graduation for courses in art, provided the student is sufficiently advanced and the requirements are met as to the standards and attendance on lectures dealing with the history and

theory of art. Three hours of credit involve two two-hour lessons in class and five hours of practice per week. Practice work is done in the studio, save as from time to time work outside is arranged with the instructor, and all practice work is criticised by the instructor. Attendance on lectures is substituted at times for one of the weekly practice hours.

The following description of courses is suggestive only, as the work varies slightly from year to year, as the needs of the individual classes demand.

All courses except Art B11 and B12 are given by Assistant Professor Jenkins, the head of the Department.

Courses in Graphics, Machine Drawing, Descriptive Geometry, and Perspective are described under the Department of Engineering.

A1. Drawing from casts and objects; painting in water colors over charcoal; color problems in hues, tints, intensities and values; painting still life from objects.

Freshman year, first semester. 3 hours.

A2. Design—pure and applied; landscape and flower studies from nature in water color and pastels.

Freshman year, second semester. 3 hours.

B3. Drawing from cast—full-length figure; applied perspective; wash painting in water colors for architectural design.

Sophomore year, first semester. 3 hours.

B4. Designing book covers and commercial advertising layouts in pen and ink rendering.

Sophomore year, second semester. 3 hours.

C5. Anatomy of head; drawing head from life in charcoal; head and figure in pen and ink; painting from still life in oil colors.

Junior year, first semester. 3 hours.

C6. Anatomy of full-length figure; particular attention given to construction rather than finished drawings. Painting in oil colors.

Junior year, second semester. 3 hours.

D7. Drawing and painting; portrait and figure from e; landscape from nature.

Senior year, first semester. 3 hours.

D8. Drawing and painting; portrait and figure; flowers and landscape.

Senior year, second semester. 3 hours.

B9 and B10. ART APPRECIATION. Lectures and assigned readings. The course covers the critical study of masterpieces, home decoration, church adornment and art in dress. The terminology and technique of all lines of art are fully discussed.

Sophomore, Junior and Senior years, both semesters. 1 hour each. Th, VIII.

B11. HISTORY OF ART. Outline study of Greek art. An attempt is made to trace the historic development of the various forms of Greek art through its chief periods.

Junior and Senior years, first semester. 3 hours. VII.

Professor Spalding.

B12. HISTORY OF ART. Outline study of Gothic and Renaissance architecture, sculpture and painting.

Junior and Senior years, second semester. 3 hours. VII.

Professor Spalding.

ASTRONOMY

Those who wish to select Astronomy as a major should consult the head of the department concerning the requirements.

B1 and C2. GENERAL ASTRONOMY. A general course of lectures and recitations in descriptive astronomy with regular evenings at the observatory, and simple observations systematically recorded in notebooks.

This course is designed for students who have had only elementary courses in physics, chemistry and trigonometry. Class room, two hours a week; lecture and observatory amounting to one exercise a week.

Junior and Senior years, both semesters. 3 hours. VII.
Professor Brackett.

C3. DESCRIPTIVE ASTRONOMY. A study of the essential facts and principles of astronomy with lectures and reading on the history of its development as a science and discussion of theories of cosmogony and evolution. Systematic observation of certain objects with the equatorial.

This course is designed for students who have a working knowledge of analytic geometry and calculus and of the more important principles in physical science; or it may be taken as an advanced course by those who have had Astronomy B1 and C2. Some preparation in free-hand and mechanical drawing also is very desirable.

Junior and Senior years, first semester. 3 hours. V.
Professor Brackett.

D4. THEORETICAL AND PRACTICAL ASTRONOMY. Spherical co-ordinates; least squares; determination of time, latitude and longitude with sextant and theodolite; regular observation work with equatorial and transit.

Prerequisites: Astronomy B1 and C2, or C3.

This course may be taken in conjunction with Astronomy C2 by students who have had sufficient preparation in mathematics and drawing. Ordinarily alternates with Astronomy D6.

Class room, one hour a week; lecture and observatory amounting to two exercises a week.

Junior and Senior years, second semester. 3 hours. V.
Professor Brackett.

D6. ASTROPHYSICS. A review of the principles of spectrum analysis, and the results obtained in physical and chemical laboratories; a study of astronomical spectroscopy of forms of spectrographs and spectroheliographs, and recent advances in the subject; observatory work with the horizontal solar telescope and spectrograph.

This course may be taken in conjunction with Astronomy C2 by students who have sufficient preparation in physical science. Class meets one hour a week; lecture and observatory amounting to two exercises a week. Prerequisites: Astronomy B1 and C2. Ordinarily coordinates with Astronomy D4.

Junior and Senior years, second semester. 3 hours.

Professor Brackett.

Laboratory fee \$5.00.

(Not given in 1917-1918.)

BIBLICAL LITERATURE

GENERAL BIBLE STUDY

Although courses B3, B5, C5, and C6 are complete in themselves, one or more hours or credits are accepted for graduation unless at least two other courses are completed.

B1 and A2. CONTENTS OF THE BIBLE. The purpose is to make the student acquainted with the contents of the English Bible. The material, style and purpose of the various facts will be discussed.

Freshman year, both semesters. 1 hour each. W, IX.

Professor Colcord.

B3. THE PRESERVATION AND TRANSMISSION OF THE OLD TESTAMENT. A general study of the manuscripts, versions, and other authorities, together with the history of biblical translations.

Sophomore year, first semester. 1 hour. F, XIII.

Dr. Marriott.

B4. THE PRESERVATION AND TRANSMISSION OF THE NEW TESTAMENT. A general study of the manuscripts, versions, and other authorities, together with the history of Biblical translations.

Professor Norton.

Sophomore year, second semester. 1 hour. F, XIII.

C5. OLD TESTAMENT INTRODUCTION. Historical and Literary Study of the Old Testament. Lectures, reading of selected portions of the Old Testament narrative, and reading of a brief volume of Old Testament Introduction.

Junior year, first semester. 1 hour. F, XI.

Professor Parker.

C6. NEW TESTAMENT INTRODUCTION. An introduction to the historical study of the New Testament writings, proposing to give briefly the theories of origin of the various books and of the formation of the collection called "The New Testament."

Junior year, second semester. 1 hour. F, XI.

Mr. Marriott.

C7 and C8. THE TEACHINGS OF JESUS. The sources of our knowledge of the life of Jesus, the critical problems involved in a study of these sources, and a systematic study of the life and teachings of Jesus in the light of His own day and ours. Lectures and text-book.

Open to Seniors, and to Juniors with permission of instructor. Both semesters. 1 hour. F, IX.

Mr. Wark.

BIBLICAL HISTORY AND LITERATURE

B21-B22. ANCIENT ORIENTAL HISTORY AND LITERATURE. The beginnings of the earliest civilization, and its development in the lands of the Biblical environment, including Babylonia, Assyria, Egypt, Persia, and Palestine. A background for a comprehensive study of Biblical History and Literature.

Sophomore year, both semesters. 3 hours.

Professor Stearns.

(Not given in 1917-1918.)

COURSES OF INSTRUCTION

23. HEBREW HISTORY AND LITERATURE. From pre-historic times: in history, to the capture of Jerusalem; in literature, to the completion of the Old Testament.
Junior and Senior years, first semester. 3 hours. V.
Professor Stearns.
24. EARLY CHRISTIAN HISTORY AND LITERATURE. The development during the first four centuries.
Junior and Senior years, second semester. 3 hours.
Professor Stearns.
(Not given in 1917-1918.)
28. CHRISTIAN MISSIONS. History of efforts to extend knowledge of Biblical literature, with special attention to modern missionary movements.
Junior and Senior years, second semester. 3 hours.
Professor Stearns.
(Not given in 1917-1918.)
25. HISTORY OF RELIGIONS. Development of the great religious systems of the world, with such ethical analysis as may be necessary for comparisons with Biblical values. The object is to widen historical information, and to emphasize the place the Bible holds in religion.
Junior and Senior years, first semester. 3 hours. I.
Professor Stearns.
26. HISTORY OF CHRISTIANITY. The historical development of Christianity into a world religion. Lecture course with required readings.
Junior and Senior years, second semester. 3 hours. I.
Professor Stearns.
21. HEBREW GRAMMAR. A course for beginners. Exercises in reading and writing Hebrew.
Prerequisite: A B course in either Greek, Latin or German.
Junior and Senior years, first semester. 3 hours.
(To be given if elected by a sufficient number.)
Professor Stearns.

C32. HEBREW READINGS. Translations of representative selections from Old Testament Literature, to enable student to read the Hebrew Bible intelligently.

Prerequisite: Biblical Literature, C31.

Junior and Senior years, second semester. 3 hours.

Professor Stearns.

C33. THE POETRY OF THE BIBLE. With special study of portions of Isaiah, The Psalms, and Job.

Junior and Senior years, first semester. 3 hours.

Professor Stearns.

(Not given in 1917-1918.)

D42. SEMITIC INSTITUTIONS AND CULTURE. Special studies in Semitic customs, arts, and letters, more or less connected with Old Testament history.

Prerequisite: B22 or C23.

Junior and Senior years, second semester. 3 hours. V.

Professor Stearns.

BIOLOGY

A1. GENERAL BIOLOGY. A course introductory to the study of animal life, comprising field and laboratory work on living organisms, and especially scientific methods of observing and recording facts.

Prerequisite to further work in zoology. Class room, two hours a week; laboratory, one exercise a week.

Freshman year, first semester. 3 hours. Class room M, W, or Th, 1:15-4:10. laboratory, T, W, or Th, 1:15-4:10.

Professor Hilton and Assistant.

Laboratory fee, \$5.00.

A2. GENERAL BIOLOGY. A brief study of some of the fundamental biological phenomena manifested in the animal kingdom, such as evolution, adaption, life processes, etc. A slight acquaintance, also, will be gained with the various groups of plants and their chief characteristics.

A course is intended primarily for those who desire a glimpse of the general field of Biology. Those intending to major in botany are advised to enter directly Botany B21. Laboratory and field work, one period a week; lecture, two hours a week.

Human year, second semester. 3 hours. Class room, M, W, Friday, T, W, or Th, at 1:15-4:10.

Assistant Professor Munz.

Laboratory fee, \$5.00.

BOTANY

1. GENERAL BOTANY. A general course covering in two semesters the entire field of botany, with special emphasis on the morphology and phyletic relationship and evolution of plants.

Necessary introductory course for advanced work in botany. Laboratory and field work. Laboratory, one exercise a week; lecture, two hours a week. Prerequisite: Biology A2 or its equivalent.

Human year, first semester. 3 hours. W, F, I; Friday, T, W, 1:15-4:10.

Assistant Professor Munz.

Laboratory fee, \$3.50.

2. GENERAL BOTANY. A continuation of B21, dealing primarily with the flowering plants (Phanerogams). Prerequisite: Botany B21 or equivalent.

Human year, second semester. 3 hours. W, F, I; Friday, T or W, 1:15-4:10.

Assistant Professor Munz.

Laboratory fee, \$3.50.

3. PLANT PHYSIOLOGY. A study of the behavior and processes of plants, their nutrition, reproduction, etc.

Class house and a well equipped laboratory are available for this course. Laboratory, two periods a week; lecture, one hour a week.

Prerequisite: Botany B22.

Junior and Senior years, second semester. 3 hours.

Assistant Professor Munz.

Laboratory fee, \$7.00.

(Given in 1917-1918.)

C24. SUBTROPICAL HORTICULTURE. An introductory course in the study of economic fruits and fruit products of the Pacific Slope and the subtropics.

Laboratory, one period a week; lecture, one hour a week.
requisite: Botany B22.

Junior and Senior years. 2 hours.

Assistant Professor Munz.

Laboratory fee, \$3.50.

(Not given in 1917-1918.)

C25. MYCOLOGY. A systematic study of the growth and life of fungi, with special emphasis on the morphological, systematic and cytological phases.

An extensive herbarium of fungi is available for reference study. Important for those intending to study Plant Pathology.
requisite: Botany B21 and B22, or equivalents. Laboratory, two periods a week; lecture, one hour a week.

Junior and Senior years, first semester. 3 hours. Lectures, laboratory, T, Th, 1:15-4:10.

Assistant Professor Munz.

Laboratory fee, \$5.00.

D26. PLANT PATHOLOGY. A study of plant diseases, their causal agents, methods of controlling them and methods of studying them in the laboratory.

Important for those intending to enter any phase of agriculture.
Laboratory, two periods a week; lecture, one hour a week.
requisite: Botany C25, unless by special arrangement.

Junior and Senior years, second semester. 3 hours.

Assistant Professor Munz.

Laboratory fee, \$5.00.

D27. ADVANCED BOTANY. A detailed study of the physiology and taxonomy of some of the groups of plants.

Chiefly a laboratory course and the work for the most part individual. Both laboratory and field work. Laboratory, two periods a week.

ek; conference or class room, one hour a week. Prerequisites: Botany A21 and B22.

Junior or Senior year, first semester. 3 hours.

Assistant Professor Munz.

Laboratory fee, \$5.00.

D28. SPECIAL BOTANY. Same as Botany D27, or continuation of that course.

Prerequisites: Botany A21 and B22.

Junior or Senior year, second semester. 3 hours.

Assistant Professor Munz.

Laboratory fee, \$5.00.

D29. GENERAL MORPHOLOGY.

Junior and Senior years, first semester. 3 hours.

Assistant Professor Munz.

Laboratory fee, \$5.00.

D31 and D32. SPECIAL MYCOLOGY. Special and detailed investigations in fungi or plant diseases.

Laboratory and field work and occasional conferences with the instructor. Work for the most part individual. Prerequisite: Botany C25.

Junior and Senior years. 3 hours each.

Assistant Professor Munz.

Laboratory fee, \$5.00 each.

C30. PLANT PROPAGATION. The elements and principles of the propagation of plants and improvement of plant varieties. Practice in the care of seeds, cuttings, bulbs and rooted plants; in grafting and budding; in hybridizing and selection of plants, etc.

A glass house, lath house and special laboratory equipment are available for this course. Designed for those who are interested in nursery work, landscape gardening, and many phases of horticulture. Class room, one hour a week; laboratory, two periods a week. Prerequisite: C23.

Junior and Senior years, second semester. 3 hours.

Assistant Professor Munz.

Laboratory fee, \$10.00.

(Not given in 1917-1918.)

CHEMISTRY

Students who wish to major in Chemistry should be prepared to meet the following requirements:

1. A knowledge of elementary Physics, equivalent to Physics and B2.
2. Sufficient acquaintance with French and German to enable a student to follow with tolerable ease the literature of the subject.
3. Mathematics, including the elements of the Calculus.
4. Chemistry C7, C8, C9, and C10 and six or more hours of courses in Chemistry, the precise nature and number to be determined in individual cases.
5. In some cases a special examination covering the general field of Chemistry.

A breakage deposit of \$5.00 is required of all students taking laboratory courses. At the conclusion of the work the deposit, less breakage, is returned.

Owing to the absence of Mr. Woodford, certain courses in agricultural chemistry are omitted for this year.

A1 or A2. THE ELEMENTS OF CHEMISTRY. An introductory course covering the general field, and intended for those who have no previous knowledge of the subject.

To be followed by Chemistry A3 or A4. Class room, three hours a week; laboratory, one exercise a week.

Freshman year, either semester. 4 hours. First semester, I; second semester, II; laboratory, M or T, 1:15-4:10.

Professor Lyman and Assistant.

Laboratory fee, \$6.00.

A3 or A4. SYSTEMATIC CHEMISTRY OF THE METALS. Devoted chiefly to the study of the metals and their salts.

Open to those who have taken Chemistry A1 or A2, or equivalent. To be accompanied by Chemistry B31 or B32, B33 or B34. The section reciting in Group I is primarily for women and lays special emphasis on questions pertaining to food and sanitation, while the section reciting in Group II, primarily for men, deals more particularly with the chemistry of munitions.

Freshman year, either semester. Class room, 3 hours. First semester, two divisions, I, II; second semester, IV.

Mr. Flint.

B5 or B6. **SYSTEMATIC CHEMISTRY OF THE NON-METALS.** Devoted chiefly to the study of the non-metals and the theories of Chemistry.

Prerequisites: Chemistry A3 or A4. To be accompanied by chemistry B35 or B36.

Freshman and Sophomore years, either semester. Class room, 3 hours. First semester, III; second semester, two divisions, I, II.

Professor Lyman.

B31 or B32. **INORGANIC PREPARATIONS.** Preparation of some of the simpler inorganic compounds, which illustrate the matter brought out in class room in the courses listed above.

Intended primarily for those who are taking Chemistry A3 or A4, but who do not intend to take further work in the subject of chemistry.

Freshman year, either semester. 1 hour. M or T, 1:15-4:10.

Professor Lyman and Mr. Flint.

Laboratory fee, \$5.00.

B33 or B34. **QUALITATIVE ANALYSIS.** Analysis for metals and positive ions. Intended to accompany Chemistry A3 or A4.

Laboratory periods twice a week, from which time may be taken for one class meeting a week.

Freshman year, either semester. 2 hours. Laboratory (four periods, from which two are to be chosen), M, T, Th, F, 1:15-4:10.

Assistant Professor Bartlett and Mr. Woodford.

Laboratory fee, \$10.00.

B35 or B36. **QUALITATIVE ANALYSIS.** Inorganic Analysis with special reference to non-metals and negative ions. Intended to accompany Chemistry B5 or B6.

Laboratory periods twice a week, from which one hour may be taken for class meeting.

Freshman and Sophomore years, either semester. 2 hours. Laboratory (four periods, from which two are to be chosen), M, T, Th, 1:15-4:10.

Professor Lyman and Mr. Woodford.

Laboratory fee, \$10.00.

C7. QUANTITATIVE ANALYSIS. Theory and practice quantitative methods, chiefly gravimetric, including problems of stoichiometry. Intended to give the student a knowledge of the fundamental methods of work.

Prerequisites: Qualitative Analysis. Occasional lectures; laboratory, three exercises a week.

Sophomore, Junior and Senior years, first semester. 3 hours. Lecture, M, at 1:15. Laboratory, M, T, Th, F, 1:15-4:10.

Assistant Professor Bartlett and Assistant.

Laboratory fee, \$12.00.

C8. QUANTITATIVE ANALYSIS. Theory and practice quantitative methods, chiefly volumetric.

Prerequisite: Qualitative analysis.

Sophomore, Junior, and Senior years, second semester. 3 hours. Lecture, M, at 1:15; laboratory, M, T, Th, F, 1:15-4:10.

Assistant Professor Bartlett and Assistant.

Laboratory fee, \$12.00.

C9 and C10. SYSTEMATIC ORGANIC CHEMISTRY. study of the more important compounds of carbon, with preparation of about twenty organic substances.

Prerequisites: Chemistry A1 and A3, or Chemistry A3 and Class room, two hours a week; laboratory, one exercise a week.

Sophomore, Junior, and Senior years, both semesters. 3 hours. Class room M, W, VII; laboratory, T, F, 1:15-4:10.

Professor Lyman.

Laboratory fee, \$6.00 per semester.

C11 and C12. MINERAL CHEMISTRY. The study of morphology of crystals, and the formation, occurrence, composition, properties and use of minerals. Laboratory work: Crystal drawings, (2) Blowpipe analysis and identification about one hundred minerals.

Prerequisites: Qualitative analysis. Class room, two hours a week; laboratory, one exercise a week.

Mr. Woodford.

Laboratory fee, \$4.00 per semester.

(Not given in 1917-1918.)

D13. ADVANCED ORGANIC CHEMISTRY. Intended to supplement Chemistry C9 and C10 so that the student may be better fitted for university work. A study of certain typical reactions, with the preparation of compounds illustrating the ranges studied.

Prerequisites: Chemistry C9 and C10. Lectures, one hour a week; laboratory, two exercises a week.

Junior and Senior years, first semester. 3 hours.

Professor Lyman.

Laboratory fee, \$12.00.

D14. ELEMENTS OF PHYSIOLOGICAL CHEMISTRY. The preparation and study of certain organic substances, especially of those which have to do with physiological chemistry. Intended to prepare the student for work in physiological chemistry but not to take the place of the courses given in medical school in that subject.

Prerequisites: Chemistry C9 and C10. Lectures, one hour a week; laboratory, two exercises a week.

Junior and Senior years, second semester. 3 hours.

Professor Lyman.

Laboratory fee, \$10.00.

C15 and C16. AGRICULTURAL CHEMISTRY. The study of the origin of soils, their physical, chemical and biological properties, and the relation of these to plant growth. The effects of fertilizers, irrigation, etc., are also considered. Laboratory work is roughly quantitative, and includes experiments in soil physics as well as in soil chemistry.

Prerequisites: Chemistry B33 and B35. Class room, two hours a week; laboratory, one period a week.

Sophomore, Junior, and Senior years, both semesters. 3 hours.

Class room, M, W, IX; laboratory, T, 1:15-4:10.

Mr. Flint.

Laboratory fee, \$5.00 per semester.

D17. ADVANCED QUANTITATIVE ANALYSIS. A continuation and further development of Chemistry C7 and C8. This may take the form of rock analysis, agricultural analysis (soils, etc.) or some other practice in standard quantitative methods.

Laboratory, three exercises a week.

Junior and Senior years, first or second semester. 3 hours.

Assistant Professor Bartlett and Assistant.

Laboratory fee, \$12.00.

D18. ADVANCED QUANTITATIVE ANALYSIS. This may take the form of special agricultural analysis (fertilizers, insecticides, fungicides, etc.); or of gas analysis, including general technical processes and the determination of the densities of gases.

Prerequisites: Chemistry, C7 and C8. Laboratory, three exercises a week.

Junior and Senior years, first or second semester. 3 hours.

Assistant Professor Bartlett and Assistant.

Laboratory fee, \$12.00.

D21 and D22. PHYSICAL CHEMISTRY. A survey of the whole subject is given, including the relation of mass to volume, phase relations, thermochemistry and thermodynamic chemistry of solutions and the dissociation hypothesis, electro-chemistry and optical chemistry. The laboratory work consists of the study of physico-chemical methods as related to the subject matter of the lectures.

Class room, two hours a week; laboratory, one exercise a week. Physics B1 and B2 and Analytical Geometry and Calculus must precede or accompany this course.

Open to Juniors and Seniors who have passed satisfactorily Chemistry C7 and C8. 3 hours each.

Assistant Professor Bartlett and Mr. Flint.

Laboratory fee, \$8.00.

D23-D24. ADVANCED LABORATORY INVESTIGATION AND RESEARCH.

This course is open to a limited number of students who present the written certification of the instructor in charge as to adequateness of preparation and experience. 1 to 3 hours each, to be agreed upon at time of registration.

(a) ORGANIC. The work for the year 1917-1918 is the preparation of esters of paranitrobenzyl alcohol. Also, a study of improved methods for the preparation of some common organic compounds such as acetamid.

Both semesters.

Professor Lyman.

(b) PHYSICO-CHEMICAL. The work during the year 1917-1918 takes the form of electro-chemistry. Certain oxidation cells are to be studied. Considerable experience in laboratory manipulation will be acquired.

Both semesters.

Assistant Professor Bartlett.

(c) MINERALOGICAL. The collection and identification of local minerals, together with at least one quantitative chemical analysis.

Second semester.

Mr. Woodford.

(Not given in 1917-1918.)

D19. CHEMISTRY CONFERENCE. Designed primarily to establish in the minds of those students who wish to be teachers the fundamental principles and the details of chemical theory which are generally taught in the first two years of college Chemistry. This may be supplemented by advanced work along special lines in accordance with the particular desires of the class.

One hour.

D20. CHEMISTRY CONFERENCE. Designed to familiarize students with recent chemical literature. The chemical journals will be used as texts and special papers will be called for.

One hour.

CONSTITUTIONAL HISTORY

(See History.)

ECONOMICS AND SOCIOLOGY

Students desiring a departmental major in Economics or Sociology must take B1 and B2, D19 and D20, and at least 18 hours from either C5, C6, C8, C9, C29, D7, D10, or B21 and B22, C8, C25, C29, D26, D27, D30, as determined in consultation with the head of the department.

B1 and B2. INTRODUCTION TO ECONOMICS. An elementary course which covers the entire field. Conducted for those desiring a general knowledge of the subject, it lays the foundation for specialization in the department.

Sophomore and Junior years, both semesters. 3 hours each.

VII.

Professor Sumner and Mr. Mertzke.

B3. PRINCIPLES OF ECONOMICS. A rapid survey of the field covered in Economics B1 and B2, intended to meet the needs of mature students, particularly those specializing in other fields.

Junior and Senior years, first semester. 3 hours.

Professor Sumner.

(Not given in 1917-1918.)

C5. MONEY AND BANKING. The history and theory of money and banking, especially in their bearing on the practical problems of today.

Prerequisite: Economics B1 and B2.

Junior and Senior years, first semester. 3 hours.

Professor Sumner.

(Not given in 1917-1918.)

6. PUBLIC FINANCE. A study of taxation and other methods of meeting governmental expenditures in the light both theory and practice. The budget, local and national taxation and public debts are among the subjects taken up. Junior and Senior years, second semester. 3 hours. III. Professor Sumner.

8. PROBLEMS OF LABOR. The factory system, modernization of labor, woman and child labor, labor legislation, workingmen's insurance, and other appropriate problems.

Prerequisites: Economics B1 or B3.
Junior and Senior years, second semester. 3 hours. VIII.
r. Mertzke.

9. CORPORATION FINANCE. An examination of the plans, methods of promotion, financing and legal status of corporations.

Prerequisites: Economics B1 and B2.
Junior and Senior years, first semester. 3 hours. III.
Professor Sumner.

7. TRUST PROBLEMS. A study of the growth of modern methods of large scale production and distribution. The profits and dangers of monopolies and of trusts. Pools, trusts, and other forms of combination considered, together with plans for their regulation.

Junior and Senior years, first semester. 3 hours. V.
Professor Sumner.

10. TRANSPORTATION. A study of the principal problems involved in securing and regulating the land and water transportation of the United States. Normally follows Economics D7.

Junior and Senior years, second semester. 3 hours. V.
Professor Sumner.

D12. SOCIAL PSYCHOLOGY.

(See Psychology D12.)

Junior and Senior years, second semester. 3 hours. VI.
Professor Ewer.

D19 and D20. APPLIED SOCIOLOGY. The work consists of first-hand study of local industrial and social problems together with the reading and discussion of the latest literature treating of these subjects.

Senior year, both semesters. 1 hour each W, IX.
Professor Sumner.

B21 and B22. ELEMENTS OF SOCIOLOGY. The development of society, its functions, institutions and forces. Illustrations are drawn from primitive society as well as the America of today.

Sophomore and Junior years, both semesters. 3 hours each.
Mr. Mertzke and Assistant Professor Kull.

C25. POOR RELIEF. An examination of the causes of pauperism and their remedy, the obligation of society, the methods of relief.

Junior and Senior years, first semester. 3 hours. III.
Mr. Mertzke.

C28. CITY PROBLEMS. The chief social and economic problems incident to modern city life. In addition to general class work, each student is required to select a problem for special investigation.

Junior and Senior years, second semester. 3 hours. III.
Mr. Mertzke.

C29. STATISTICS. An introductory study of the collection of data, their arrangement and their use.

Junior and Senior years, first semester. 3 hours.
Mr. Mertzke.

26. **CRIMINOLOGY.** A study of crime from the social point of view, including its cause and the treatment of the criminal. Normally follows Economics C25.

Junior and Senior years, second semester. 3 hours.

Professor Neely.

(Not given in 1917-1918.)

27. **THEORIES OF SOCIAL REFORM.** From Plato's Republic to Modern Socialism. The principal schemes, Utopian and scientific, for the radical change of social organizations.

Junior and Senior years, first semester. 3 hours. IV.

Professor Sumner.

30. **IMMIGRATION.** A study of the causes and effects of immigration. Special emphasis is given to the present-American issues.

Junior and Senior years, second semester. 3 hours. IV.

Professor Sumner.

ENGINEERING

The College does not give at present a full technical course in engineering; but for students who contemplate engineering work we wish also the foundation and culture of college training a course of studies has been arranged. Graduates who have followed this course complete their work for a degree in the standard schools of engineering or technology in two years.

A1 and A2. **GRAPHICS.** A course in lettering and linear engineering, including the use and care of the instruments, practice in lining and accurate constructions, geometrical problems and construction of geometrical curves.

freshman year, both semesters. 2 hours each. Laboratory, Th, 15-4:10.

Assistant Professor Belcher.

In case a student offers for credit other work in Graphics instead of engineering A1 and A2, the certificate of former work must be accompanied by the plates drawn and the instructor will judge whether the character and amount of work done are satisfactory. It must in every case include evidence of ability in lettering.

B3 and B4. **GRAPHICS.** An introductory course in orthographic and isometric projections, shade lines and shading.

Prerequisites: Engineering A1 and A2.

Sophomore year, two exercises a week, both semesters. 2 hours each. Laboratory, Th, F, 1:15-4:10.

Assistant Professor Belcher.

C11 and C12. **SURVEYING.** Class room work; field work with compass, transit, level and sextant; platting and computation from field notes; topographical surveying and work (Gillespie; Johnson).

Alternates with Engineering C15 and C16. Prerequisites: Mathematics B7 and B8 and Engineering A1 and A2.

Sophomore year, both semesters. 3 hours.

Assistant Professor Belcher.

C15. **DESCRIPTIVE GEOMETRY.** Study and practice in the elements of projection and perspective; intersections of planes and solids.

Alternates with Engineering C11. Prerequisites: Engineering A1 and A2.

Sophomore year, first semester. 3 hours.

Assistant Professor Belcher.

(Not given in 1917-1918.)

C16. **PERSPECTIVE.** Principles of shades and shadows; construction of perspective and the perspective of shadows; much practice in perspective drawing.

Alternates with Engineering C12. Prerequisite: Mathematics B7 and B8.

Sophomore year, second semester. 3 hours.

Assistant Professor Belcher.

(Not given in 1917-1918.)

D13 and D14. **APPLIED MECHANICS.** A study of the principles of mechanics of rigid bodies with many problems selected with reference to the needs of engineering students. The calculus and graphical methods are freely used. The course includes problems in statics, on reactions, stresses,

ames, center of gravity, moments of inertia, and problems in kinematics and dynamics, including rectilinear and curvilinear motion, harmonic motion, momentum and angular momentum, work power and kinetic energy.

Junior and Senior years, both semesters. 3 hours.

Assistant Professor Belcher.

ENGLISH

ENGLISH LANGUAGE AND RHETORIC

Students who elect English Language as a major are required to take English C41, D42, and D44; and, from the Department of English Literature, English A3 and A4, or B3 and B4. They will ordinarily be expected to offer also English B3a. The requirements for the major in English Literature are stated under that department. Advice as to other work should be sought from the head of the Department. Students will be admitted to C and D courses in this Department who have done satisfactory work in B and C courses in the Department of English Literature.

A21 and A22. COMPOSITION. A study of the elements of effective prose composition. Individual conferences with the instructor.

One section is reserved for foreigners. Students deficient in English A21 and A22 may be required to take English B24. Required for all courses.

Freshman year, eight divisions, two hours a week, both semesters. 16 hours each. M, F, I, V, VII, IX, XI; T, S, II, VI, VIII.

Assistant Professor Ament, Mr. Perkins, Mr. Humbert, and Miss Peatty.

A35 and A36. ELEMENTARY PUBLIC ADDRESS. An elementary course designed to acquaint the student with his own needs. Frequent practice given in simple reading, declamation, and extempore speaking. The aim is to make the voice and body responsive to thought and feeling. Individual deficiencies pointed out, and modes of correction prescribed.

Freshman year, both semesters. 2 hours each. M, F, III, XI.

Mr. Humbert.

B23. COMPOSITION. Introductory study of the short story, the essay, and literary criticism. Frequent original work. Conferences.

Open only to those who have made a B grade or better in English A21 and A22.

Sophomore year, first semester. 3 hours. V.

Professor Frampton.

B24a and B24b. COMPOSITION. A continuation of English A21 and A22. For those who need further study of composition. May be required of any students deficient in English.

Sophomore year, both semesters. 2 hours each. T, S, VIII.

Mr. Perkins.

C26. JOURNALISM. A study of the forms and methods of newspaper writing. Special consideration of reporting the news story, the special article, the editorial, newspaper style, editing.

Junior and Senior years, first semester. 3 hours. IX.

Mr. Perkins.

C25. ESSAY. Analytical and constructive study of the essay; frequent original writing to aid the student in forming a style and clarifying his ideas.

Junior and Senior years, first semester. 3 hours. IX.

Assistant Professor Ament.

D27. LITERARY CRITICISM. A study of the practice of literary criticism in the nineteenth century for the purpose of formulating a thorough critical background for the study of literature. The theories and tenets of the various schools are studied and their bearings pointed out. Lectures. Frequent practice in critical writing.

Junior and Seniors years, second semester. 3 hours.

Professor Frampton.

(Not given in 1917-1918.)

C28. THE SHORT-STORY. A study of the form and technic of the short-story. Study of American short-story writers. Frequent original work.

Open to Sophomores who have had English B23.

Junior and Senior years, second semester. 3 hours. V.

Professor Frampton.

D29. WRITING OF PLAYS. A course in the technic of the drama, with especial attention to original work.

First semester. 3 hours. IX.

Mr. Perkins.

D30. COMPOSITION SEMINAR. Practice of various forms of creative work for a limited number of advanced students.

Students must obtain the written consent of the teacher prior to registration.

Junior and Senior years, second semester. 3 hours.

Professor Frampton.

(Not given in 1917-1918.)

B31. ARGUMENTATION. A study of the elements of argumentation, the analysis of propositions and evidence and drawing of briefs. Practice debates.

Sophomore year, first semester. 3 hours. IV.

Mr. Humbert.

B32. PUBLIC ADDRESS. A study of the forms of public address. The ends of speech such as clearness, action, and belief are taken up to determine selection of material and method of presentation. The aim is to give the student reasonable control of himself before an audience while effectively presenting clear and convincing thought. Lectures. Frequent speaking before the class.

Prerequisite to English C34.

Sophomore year, second semester. 3 hours. IV.

Mr. Humbert.

C33. ADVANCED ARGUMENTATION. A study of the principles of argumentation, the tests of evidence, briefing and the structure of the forensic. Of especial value to those looking forward to the law as a profession.

Junior and Senior years, second semester. 3 hours. XI.
Professor Frampton.

C34. PRACTICAL PUBLIC SPEAKING. The extemporaneous method is used to train in the rapid formulation of thought and its attractive and effective presentation. Current topics and questions of general interest are assigned in advance, material for the class discussion, but the choice of language is left largely to the moment of speaking. Other topics are assigned at the time of speaking.

Prerequisite: English B32.

Junior and Senior years, second semester. 3 hours. VII.
Mr. Humbert.

C41. ANGLO-SAXON. A study of Anglo-Saxon grammar and the selections in Bright's "Reader."

Required of students whose major is English.

Junior and Senior years, first semester. 3 hours. VIII.
Professor Frampton.

D42. BEOWULF. A study of the text of Beowulf and Anglo-Saxon versification. Lectures.

Required of those whose major is English Language. Prerequisite: English C41.

Junior and Senior years, second semester. 3 hours. VIII.
Professor Frampton.

D44. CHAUCER. A linguistic and literary study of Chaucer. Lectures. Thesis.

is desirable, though not necessary, that those who elect this course shall have had English C41 and English B3a. Given in alternate years. Required of those whose major is English Language. Junior and Senior years, second semester. 3 hours. IV. Professor Frampton.

ENGLISH LITERATURE

Students who make English Literature their Major subject are required to take from the Department of English Language courses C41 and C42, and from the Department of English Literature courses B4, C7 or C8, two courses from C9, C10, C19, and D20, and courses from D5, D6, D15, and D16. They should consult the advisor of the department regarding their choice of courses and other requirements. The requirements for the major in English Language are given in the catalog of that department.

A1 and A2. NINETEENTH CENTURY ENGLISH AND AMERICAN LITERATURE. Characteristic literary forms and writers of the nineteenth century. Special attention to those prose productions appearing in other departments, as history, oratory, and drama. Intensive study of selected masterpieces. Freshman year, both semesters. 3 hours each. IV. Professor Stearns.

A3 and A4. HISTORICAL SURVEY OF ENGLISH LITERATURE. An introduction to the study of English literature. This course seeks to outline the chief literary tendencies, to characterize the outstanding personalities, to trace the development of the important literary types, to define critical standards, and in general to acquaint the beginner with the fundamentals of literary study and appreciation. The student will be asked to own and read a minimum number of complete masterpieces.

Recommended to students who have not had a high school course in the history of English literature and who do not plan to major in English.

Freshman year, both semesters. 3 hours each. VI, VIII. Assistant Professor Ament.

B3 and B4. DEVELOPMENT OF ENGLISH LITERATURE. A careful study of the historical and literary evolution of English literature from its beginning to the middle eighteenth century. Lectures, class discussions, and individual papers.

A working knowledge of English history is assumed. Prerequisites: English A1 and A2, or equivalent.

Sophomore year, both semesters. 3 hours. IV.

Professor Spalding.

B3a. MEDIEVAL LITERATURE. A course in comparative literature in translation with special attention to the relations between England and the Continent.

Recommended to those who major in English Language, and preparation for English D44. Open to those who have a knowledge of English history.

Sophomore year, first semester. 3 hours. IV.

Professor Frampton.

B13 and B14. GREEK LITERATURE AND LIFE.

The same as Greek B13 and B14. In exceptional cases this may be substituted for B3 and B4.

Sophomore and Junior years, both semesters. 3 hours each.

Professor Norton.

C7. THE ENGLISH ESSAY. In the general field of English essay this course seeks to trace the development of style, the appearance of minor prose types, the intellectual tendencies, and the influence of the essay in thought and form in other fields.

Junior and Senior years, first semester. 3 hours. II.

Assistant Professor Ament.

C8. THE ENGLISH NOVEL. This course follows the historical development of the English novel in technique and content, with constant reference to European influence. An attempt is made in the courses in Essay, Novel and

a to trace the main tendencies from the beginning to present day.

Junior and Senior years, second semester. 3 hours. II.
 Assistant Professor Ament.

ENGLISH POETRY OF THE SEVENTEENTH AND EIGHTEENTH CENTURIES; POETICS. Study of the scientific and poetic structure of English verse. General survey of English literature. Intensive study of Milton or Pope.

Junior and Senior years, alternate years, first semester. 3 hours. VI.
 Professor Spalding.

ENGLISH POETRY OF ROMANTIC PERIOD. Comparative study of contributions of poetry of nature and society. Special study of Wordsworth, and other selected writers of the Romantic period.

Junior and Senior years, alternate years, second semester. 3 hours. VI.
 Professor Spalding.

ENGLISH POETRY OF VICTORIAN AGE. Poetical and prose achievements of the century. Special study of Alfred, Lord Tennyson.

Junior and Senior years, alternate years, first semester. 3 hours.
 Professor Spalding.
 (Given in 1917-1918.)

PRESENT-DAY ENGLISH POETRY. Seminar study of present poets most sensibly shaping and expressing contemporary poetical philosophy and usage.

Open to students who have taken the equivalent of two courses in English and have the written consent of the instructor.
 Junior and Senior years, alternate years, second semester. 3 hours.
 Professor Spalding.
 (Given in 1917-1918.)

SHAKESPEARE'S COMEDIES AND EARLY TRAGEDIES. Special attention to Shakespeare's relations to the dramatic

influences of his period. Reading of all comedies. Study of two selected plays representative of his early material and methods.

Junior and Senior years, first semester. 3 hours.

Professor Spalding.

(Not given in 1917-1918.)

D6. SHAKESPEARE'S LATER TRAGEDIES AND ROMAN PLAYS. Analytical and interpretative study of representative dramas from each group. Individual theses upon phases of Shakespeare's mature genius and dramatic art.

Junior and Senior years, second semester. 3 hours.

Professor Spalding.

(Not given in 1917-1918.)

D15. SHAKESPEARE'S ENGLISH CHRONICLE AND ROMAN AND LATIN PLAYS. Consideration of historical material and its relation to Elizabethan drama.

Alternates with English D5.

Junior and Senior years, first semester. 3 hours. III.

Professor Spalding.

D16. SHAKESPEARE'S REPRESENTATIVE DRAMAS. Senior course in Shakespearean criticism, editing and stage production.

Alternates with English D6. Prerequisite: English D5 and D6.

Senior year, second semester. 3 hours. III.

Professor Spalding.

D11. HISTORY OF THE ENGLISH DRAMA TO 1642. Study of the development of the English drama from beginning to the closing of the theatres by the Puritans with special reference to Shakespeare's contemporaries. This course, with English D12, offers a continuous survey of English drama from the generic trope to contemporary drama.

Complementary to English D5 and D6.

Junior and Senior years, first semester. 3 hours. XI.

Professor Frampton.

2. ENGLISH DRAMA FROM 1660 TO THE PRESENT. A continuation of English D11. Special attention is paid to continental influences. During the second half of the semester the Continental drama will be studied. Junior and Senior years, second semester. 3 hours. XI. Assistant Professor Ament.

FRENCH

(See Romance Languages.)

GEOLOGY

1. GEOLOGY. Dynamic and structural geology. Students work primarily, with occasional Saturday excursions. Prerequisites: Elementary Physics, and Chemistry A1 and A2, or consent.

Junior, Junior and Senior years, second semester. 3 hours. Woodford.
(Not given in 1917-1918.)

2. PALEONTOLOGY. A one semester course primarily directed to the study of paleontology, but with a brief introduction to structural and dynamical geology. Studies are made of local geology.

Prerequisites: Botany and Zoology.
Junior and Senior years, both semesters. 3 hours. Woodford.
(Not given in 1917-1918.)

GERMAN

1. A1 and A2. ELEMENTARY COURSE. Intended especially for freshmen who offer no modern language. By the continuous use of the language in the class room the student is stimulated from the outset to think in German. Thorough training in grammar and composition throughout the year; memorizing of poetic and also prose selections; reading of a considerable body of simpler stories and poems.

Freshman year, both semesters. 3 hours each. IV. Assistant Professor Matlock.

A13 and B14. INTERMEDIATE COURSE. Grammar, composition, reading of prose and poetry, memorizing of latter.

Primarily for those entering with only one unit of recommended German. May be required of others who show special need of type of drill given.

Freshman and Sophomore years, both semesters. 3 hours each.
Professor Bissell.

B3. PROSE NARRATIVE AND DRAMA. Reading of advanced short stories or a novel, and a drama. Grammatical analysis, short essays in German on assigned topics, reading, discussion of text in German, the student expected to grow in ability to use the language freely.

Prerequisites: German A1 and A2, or two years of elementary German.

Freshman and Sophomore years, two divisions, first semester hours. I, III.

Professor Bissell and Assistant Professor Matlock.

B4. SCHILLER. Reading of selected ballads and poems of Schiller, *Lied von der Glocke*, and *Maria Stuart*.

Prerequisite: German B3.

Freshman and Sophomore years, two divisions, second semester hours. I, III.

Professor Bissell and Assistant Professor Matlock.

B1' and B2'. GERMAN COMPOSITION. Simple prose narrative and conversation. Review of fundamentals of grammar.

May be required of those deficient in German.

Freshman and Sophomore years, both semesters. 1 hour each.
W, VII.

Associate Professor Churchill.

B3' and B4'. GERMAN COMPOSITION. Advanced narrative prose, based on Wiehr's Composition.

For students of good standing.

Associate Professor Churchill.

Freshman and Sophomore years, both semesters. 1 hour each.
Th, VIII.

GERMAN NOVEL OF THE NINETEENTH CENTURY. Lectures on the development of the German Novel, with readings from works of Haupt, Eichendorff, Freytag, Auer-

Prerequisites: German B3 and B4, or equivalent.

sophomore and Junior years, first semester. 3 hours. II.

Professor Bissell.

GERMAN NOVEL OF THE NINETEENTH CENTURY. (Continued.) Lectures continued; readings from the works of Ludwig, Spielhagen, Keller, Storm, Frenssen.

Prerequisite: German C9.

sophomore and Junior years, second semester. 3 hours. II.

Professor Bissell.

C9 and C10'. GERMAN COMPOSITION AND CONVERSA-

tion required of those making German their major. Prerequisites: German B3 and B4, or equivalent, and German B3' and B4'.

sophomore and Junior years, both semesters. 1 hour each.

Professor Bissell.

III. ADVANCED GERMAN PROSE. Reading of carefully selected addresses by Emperor William, Carl Schurz, von Bismarck and other men of note, and other selections to offer a rich and varied vocabulary in the general fields of political science, history, criticism and philosophy and literature.

Prerequisites: German B3 and B4, or equivalent.

sophomore and Junior years, first semester. 3 hours. VI.

Assistant Professor Matlock.

IV. ADVANCED GERMAN PROSE. A continuation of German C19.

Prerequisite: German C19.

sophomore and Junior years, second semester. 3 hours. VI.

Assistant Professor Matlock.

D5. LESSING. Lectures on Lessing's life, works and influence. Reading of his principal dramas and portions of *Laocoon* and other prose works.

Junior and Senior years, first semester. 3 hours.

Professor Bissell.

(Not given in 1917-1918.)

D6. GOETHE. Lectures on Goethe's life, works and influence in literature, relation to Schiller. Reading of *Faust*, *I*, and at least two other works.

Prerequisite: German D5.

Junior and Senior years, second semester. 3 hours.

Professor Bissell.

(Not given in 1917-1918.)

D7. OUTLINE COURSE IN THE HISTORY OF GERMAN LITERATURE AND LANGUAGE TO THE AGE OF LESSING. Lectures supplemented by assigned readings from the great medieval epics.

Prerequisites: German C9 and C10, or equivalent.

Junior and Senior years, first semester. 3 hours.

Professor Bissell and Assistant Professor Matlock.

(Not given in 1917-1918.)

D8. CONTINUATION OF D7 FROM LESSING TO THE DEATH OF GOETHE. Reading of representative works of Lessing, Schiller and Goethe.

Prerequisite: German D7.

Junior and Senior years, second semester. 3 hours.

Professor Bissell and Assistant Professor Matlock.

(Not given in 1917-1918.)

C11. SCIENTIFIC GERMAN. Based on Hodge's *Colloquial German* and Brandt and Day's *Reader*. Assignments from the works of scientific writers.

Intended primarily for those planning to do graduate work leading to the degree of Doctor of Philosophy. Prerequisites: German C9 and C10, or equivalent.

Junior and Senior years, second semester. 3 hours. III.

Professor Bissell.

12. GERMAN COMPOSITION. Advanced course.

Required of all who desire the recommendation of the Department teachers. Prerequisites: Two years of college German, including German C9' and C10'.

Junior and Senior years, first semester. 3 hours. III.
Professor Bissell.

17. MODERN DRAMA. Lectures, assigned readings, papers.

Junior and Senior years, first semester. 3 hours. VII.
Professor Bissell.

18. MODERN FICTION. A study of the fiction of the twenty-five years. Lectures, assigned readings, papers.

Junior and Senior years, second semester. 3 hours. VII.
Professor Bissell.

GREEK

1 and B2. ELEMENTARY GREEK. A course designed for those wishing to begin the study of the language after entering college. Grammar, composition, and reading from the Anabasis of Xenophon, make it possible for those who complete the course with high grade to elect Greek B3 and B4 in their second year.

Freshman and Sophomore years, both semesters. 3 hours each. II.
Assistant Professor Robbins.

3. LYSIAS. Selected orations (Morgan), with review of grammar and study of Greek life.

Freshman and Sophomore years, first semester. 3 hours. V.
Professor Norton.

4. PLATO. Apology and Crito with selections from the Republic (Kitchel). Homer, Odyssey, three or four books; Euripides, Iphigenia at Aulis. Grammar.

Freshman and Sophomore years, second semester. 3 hours. V.
Professor Norton.

B3' and B4'. GREEK COMPOSITION.

Required of those who make Greek their major.

Freshman and Sophomore years, both semesters. 1 hour each.

Professor Norton.

C5. AESCHYLUS AND SOPHOCLES. Prometheus (Harry) and Oedipus the King (White). Translations of other tragedies read in class; study of Haigh's Greek Theater; essays.

Sophomore year, first semester. 3 hours. III.

Assistant Professor Robbins.

C6. DEMOSTHENES. Oration on the Crown (Humphreys); outline of Greek literature; sight reading.

Sophomore year, second semester. (3 hours.) III.

Assistant Professor Robbins.

C7. HELLENISTIC GREEK. One of the Gospels and one of the Pauline Epistles; informal lectures on ancient manuscripts and the elements of textual criticism.

Alternates with Greek C9.

Junior and Senior years, first semester. 3 hours.

Professor Norton.

D8. HOMER. Rapid reading of a number of books of the Iliad or Odyssey; the Homeric question.

Alternates with Greek D10.

Junior and Senior years, second semester. 3 hours.

Professor Norton.

D9. PLATO, PHAEDO AND PROTAGORAS. Outline of Greek Philosophy.

Alternates with Greek C7.

Junior and Senior years, first semester. 3 hours.

Professor Norton.

(Not given in 1917-1918.)

D10. THUCYDIDES. BOOKS VI AND VII.

Alternates with Greek D8.

Junior and Senior years, second semester. 3 hours.

Professor Norton.

(Not given in 1917-1918.)

D11 and D12. PROSE COMPOSITION AND SIGHT READING.

Required of all making Greek a major.

Junior and Senior years, both semesters. 1 hour each.

(Not given in 1917-1918.)

B13 and B14. GREEK LITERATURE AND LIFE. This course open to those who have no knowledge of the Greek language. It is intended to give, through lectures and translations, some appreciation of the Greek genius and spirit, and some knowledge of the form and content of Greek literature. Though ordinarily a year course, it may, by special arrangement with the instructor, be taken for either semester.

Sophomore and Junior years, both semesters. 3 hours each. VI.
Professor Norton.

HISTORY

Those seeking a departmental major are required to take twenty-four hours of history, including the two-hour pro-seminar listed as History D17-D18.

A17 and A18. GENERAL EUROPEAN HISTORY. An introductory course in which intensive study of selected periods is made. Weekly written and oral quizzes, in sections. Intended to bring out modern historical methods.

Freshman year, both semesters. 3 hours each. VIII.

Assistant Professor Westergaard.

B7. ENGLISH HISTORY TO 1603. An introductory course, in which emphasis is laid upon the use of sources and methods of historical work.

Sophomore year, first semester. 3 hours. II.

Assistant Professor Westergaard.

B8. ENGLISH HISTORY SINCE 1603.

A continuation of History B7, with similar aims and methods.

Sophomore year, second semester. 3 hours. II.

Assistant Professor Westergaard.

B13 and B14. ANCIENT CLASSICAL HISTORY. A history of more recent archeological investigation in the general field of ancient history.

3 hours each. III.

Professor Stearns.

B1. MEDIEVAL HISTORY. From the fall of Rome to the Renaissance. Lectures on the use of sources, supplemented by practice work, serve to introduce the student to modern historical methods.

Sophomore year, first semester. 3 hours.

Assistant Professor Westergaard.

(Not given in 1917-1918.)

B2. THE RENAISSANCE AND REFORMATION. From the fourteenth century to the reign of Louis XIV. Especial attention is paid to the lives and writings of the great leaders of that period.

Sophomore year, second semester. 3 hours.

Assistant Professor Westergaard.

(Not given in 1917-1918.)

B21-B22. ANCIENT ORIENTAL HISTORY. The beginnings of the earliest civilization and its development in Babylonia, Assyria, Egypt, Persia and Palestine.

Sophomore year, both semesters. 3 hours each.

Professor Stearns.

(Not given in 1917-1918.)

B25. CONTEMPORARY PROBLEMS. A combined lecture and reading course with special reference to present world questions, open to all classes.

First semester. 2 hours. Thursday, at 10:30 and one hour to be arranged.

Under the direction of Professor Norton.

C3. EUROPE IN THE EIGHTEENTH CENTURY.

Prerequisite: A course in English or Medieval history.

This may be taken as a D course, in which case additional work will be required.

Junior and Senior years, first semester. 3 hours. VII.

Assistant Professor Westergaard.

C15. MODERN ASIATIC HISTORY. A study of the later and institutions, chiefly of China and Japan; the changes under Western influences, and the various relations of Asia to America and Europe.

May be taken as a D course, additional work is required. Prerequisite: A course in English, Medieval, or American History.

Junior and Senior years, first semester. 3 hours.

(Not given in 1917-1918.)

C16. HISTORY OF SPANISH AMERICA. Through lectures and collateral reading, a study is made of the life, the social and political institutions, the economic development and the relations with Europe and America of the principal Spanish-American countries.

Prerequisite: A course in English, Medieval, or American History.

Junior and Senior years, second semester. 3 hours.

(Not given in 1917-1918.)

7. See *Dep. Hist. of Diplomacy*
A. EUROPE IN THE NINETEENTH CENTURY.

Prerequisite: History C3.

Junior and Senior years, second semester. 3 hours. VII.

Assistant Professor Westergaard.

(see p. 57.)
D5 and D6. AMERICAN HISTORY. Lectures will be given on the Westward movement of the American people, the development of our social and economic institutions, and the history of political parties. The class makes careful studies of certain important topics.

Junior and Senior years, first and second semesters. 3 hours. V.

First semester, Assistant Professor Westergaard; second semester, Assistant Professor Kull.

Contemp. Problems.

D17 and D18. PRO-SEMINAR IN HISTORY.

Required of those seeking a departmental major in History open to other advanced students.

Senior year, both semesters. 1 hour.

Assistant Professor Westergaard.

For courses in Hebrew History, Early Christian History, History of Religion and History of Christianity, see under the Department of Biblical Literature.

CONSTITUTIONAL HISTORY

B19. AMERICAN COLONIAL GOVERNMENT. This course is a study with particular reference to the government administration of the individual American colonies and settlements. The ground covered is that of the French colonies, the Puritan colonies, Virginia, Maryland, and the Carolinas, the Middle colonies, the Dutch and Quaker colonies, Spanish and French settlements, and the Indians.

Intended to prepare students for the later courses in American Constitutional History and Comparative Constitutional History.

Sophomore and Junior years, first semester. 3 hours.

Professor Neely.

(Not given in 1917-1918.)

D9 and D10. COMPARATIVE CONSTITUTIONAL HISTORY. With the English Constitution as a basis, comparison of the constitutions of European and American States is made. This gives a fair knowledge of present-day governments.

Junior and Senior years, both semesters. 3 hours.

Professor Neely.

(Not given in 1917-1918.)

D11 and D12. AMERICAN CONSTITUTIONAL HISTORY. In this course the principles of constitutional law are taught and constitutional questions discussed and constitutional changes examined.

Prerequisite: A course in American History.

Junior and Senior years, both semesters. 3 hours each. IV.

First semester, Professor Neely; second semester, Assistant Professor Kull.

D17 American Diplomatic

ITALIAN

(See Romance Languages.)

LATIN

A1 and A2. **ELEMENTARY LATIN.** A course intended for those desiring to begin the study of the language after entering college. Grammar, composition, and readings from Caesar's Gallic War.

Freshman year, both semesters. 3 hours each. II.

Professor Colcord.

A3 and A4. **VERGIL AND CICERO.** Selections from the *Aeneid* and the *Orations* of Cicero.

Freshman and Sophomore years, both semesters. 3 hours each. II.

Assistant Professor Robbins.

B5. **CICERO AND LIVY.** Cicero; (Kelsey) *De Senectute* and *De Amicitia*; Livy; (Westcott) Books XXI and XXII, selections; written translations, collateral reading, sight reading.

Freshman year, first semester. 3 hours. VI.

Professor Colcord.

B6. **HORACE.** (Bennett) *Odes*, *Epodes*, *Carmen Saeculare*; Horatian meters; written translations, collateral reading, sight reading.

Freshman year, second semester. 3 hours. VI.

Professor Colcord.

B5' and B6'. **LATIN COMPOSITION.**

Required of all making Latin their major.

Freshman year, both semesters. 1 hour each. F, VII.

Professor Colcord.

C7. **PLINY.** (Westcott) *Letters*, Tacitus, (Gudeman) *Germania* and *Germania*. Collateral readings, history of Roman satire.

Sophomore year, first semester. 3 hours. VIII.

Professor Colcord.

C8. **PLAUTUS.** *Captivi, Trinummus*, Terence, *Adelp Andria*. Collateral readings, study of early Roman com and fragments of early Latin.

Sophomore year, second semester. 3 hours. VIII.

Professor Colcord.

C7' and C8'. **LATIN COMPOSITION.** Connected narrative. Required of all making Latin their major. Prerequisites: I B5' and B6'.

Sophomore year, both semesters. 1 hour each.

Professor Colcord.

D9. **CICERO.** *Letters, Tusculan Disputations*. Roman satire; Persius, Martial and Juvenal, selections. History of Roman satire.

Junior and Senior years, first semester. 3 hours.

Professor Colcord.

(Not given in 1917-1918.)

D10. **CATULLUS; LUCRETIVS; TIBULLUS; PROPERTIUS; OVID; LUCAN (Crowell.)** Selections. Topics in outline of Roman literature.

Junior and Senior years, second semester. 3 hours.

Professor Colcord.

(Not given in 1917-1918.)

D11. **TACITUS.** *Histories and Annals*.

Junior and Senior years, first semester. 3 hours. V.

Professor Colcord.

D12. **VERGIL.** *Bucolics and Aeneid, Books VII-IX*. Ovid. Selections. Christian and Latin Hymns.

Junior and Senior years, second semester. 3 hours. V.

Professor Colcord.

D13 and D14. **LATIN COMPOSITION.** Original paper. Required of those making Latin their major. Prerequisites: Latin C7' and C8'.

Junior and Senior years, both semesters. 1 hour each.

Professor Colcord.

D15 and D16. SPECIAL LATIN.

adapted to the needs of the individual student. Required of those seeking a departmental major in Latin.

Junior year, both semesters. 3 hours each. IV.

Professor Colcord.

LAW

B1 and B2. ELEMENTARY LAW. This course treats of the sources of law, common law, equity. A text book is used, also reported cases, combining the "text book method" with the "case system" of teaching law.

Junior and Senior years, both semesters. 3 hours each. I.

First semester, Professor Neely; second semester, Professor Colcord.

C3. PLEADING.

Junior and Senior years, first semester. 3 hours. VI.

Professor Neely.

C4. EVIDENCE.

Junior and Senior years (usually follows C3 in second semester)

1917-1918, first semester. 3 hours. II.

Professor Neely.

C17. AMERICAN DIPLOMACY. A study is made in this course of the history of the foreign relations of the American Colonies under the Continental Congress, and an examination of the important treaties of the United States. Establishment, organization and history of the Department of State.

Junior and Senior years, first semester. 3 hours.

Professor Neely.

C18. INTERNATIONAL LAW. In this course a study is made of the principles and rules of law that have been adapted for the conduct of international affairs by consenting nations.

Junior and Senior years, second semester. 3 hours.

Professor Neely.

(Not given in 1917-1918.)

MATHEMATICS

The courses in mathematics designated A1 and A2, A3 and A5 and A6, A9 and A10, and B7 and B8 are intended primarily for Freshmen. Students who enter with credit for three and a half or four units of commended work in mathematics, including geometry and trigonometry, may take Mathematics B7 and B8, B13 and B14. Mathematics B7 and B8 are required of students in engineering. Students who wish to take further work in mathematics, but who have not sufficient preparation for the B courses, may take Mathematics A1 and A2, or A3 and B4, or A9 and A10, according to their preparation and need. Mathematics A5 and A6 are intended primarily for those who do not expect to take further work in the subject.

A1. SOLID GEOMETRY. The geometry of space with original exercises and problems.

Freshman year, first semester. 3 hours. VIII.
Professor Stearns.

A2. PLANE TRIGONOMETRY. Essential principles and applications to problems in surveying.

Freshman year, second semester. 3 hours. VIII.
Professor Stearns.

A3-B4. ALGEBRA. Review of fundamental notions of operations, quadratic equations, ratio, proportion and variation, commensurable, incommensurable, and imaginary numbers, progressions, permutations and combinations, binomial theorem, series, undetermined coefficients, logarithms, determinants, theory of equations.

Freshman year, both semesters. 3 hours each. V.
Associate Professor Russell.

A5 and A6. ELEMENTARY ANALYSIS. A theoretical and historical study of some of the most interesting principles of mathematical analysis.

Freshman year, two divisions, both semesters. 3 hours each.
Assistant Professor Berry.

9. ALGEBRA. A semester course in second year algebra, designed for those who have studied algebra only a year. Freshman year, two divisions, first semester. 3 hours. III, IV. Associate Professor Russell.
10. TRIGONOMETRY. The elements of plane trigonometry with practical problems. Freshman year, two divisions, second semester. 3 hours. III, IV. Associate Professor Russell.
15. SPHERICAL TRIGONOMETRY. A general course in the essentials of spherical trigonometry, with applications in geodesy and astronomy. Prerequisite: Plane trigonometry. Sophomore and Junior years, first semester. 2 hours. Associate Professor Russell.
(Not given in 1917-1918.)
17. ANALYTIC GEOMETRY. A course in plane analytic geometry designed especially for students of physics and engineering. Freshman and Sophomore years, first semester. 3 hours. VII. Assistant Professor Belcher.
8. ANALYTIC GEOMETRY AND CALCULUS. An introduction to differential calculus with applications to analytic geometry and mechanics. Designed to follow Mathematics B7. Freshman and Sophomore years, second semester. 3 hours. VII. Assistant Professor Belcher.
13. ANALYTIC GEOMETRY AND CALCULUS. An elementary course in the principles of co-ordinate geometry and introduction to the differential calculus. Designed to follow Mathematics A1 and A2, A3 and B4, or A9 A10. Sophomore year, first semester. 3 hours. VI. Associate Professor Russell.

B14. DIFFERENTIAL AND INTEGRAL CALCULUS. A course in the differential and integral calculus with applications chiefly to analytic geometry.

Designed to follow Mathematics B13.

Sophomore year, second semester. 3 hours. VI.

Associate Professor Russell.

C17-C18. ADVANCED ANALYTIC GEOMETRY AND CALCULUS. Fundamental processes in integration with applications to analytic geometry and mechanics; functions of several variables and space co-ordinates; partial differentiation; differential equations.

Sophomore and Junior years, both semesters. 3 hours each.

Assistant Professor Belcher.

(Not given in 1917-1918.)

C19. DIFFERENTIAL AND INTEGRAL CALCULUS.

A continuation of Mathematics B14.

Junior year, first semester. 3 hours. VII.

Associate Professor Russell.

D20. THEORY OF EQUATIONS. Analysis and solution of higher algebraic equations; review of determinants, elementary reductions and processes, elimination and linear transformations.

Alternates with Mathematics D24.

Junior and Senior years, second semester. 3 hours.

Associate Professor Russell.

(Not given in 1917-1918.)

D24. DIFFERENTIAL EQUATIONS. A general course in the theory and solution of differential equations.

Junior and Senior years, second semester. 3 hours. VII.

Associate Professor Russell.

The following cycle of courses is given to Juniors and Seniors: Mathematics D25 and D26, Mathematics D27 and D28, and Mathematics D21 and D22. At present but one of the courses is given each year.

D21 and D22. HIGHER ANALYSIS. This course is an extension of the more elementary analysis developed in Mathematics B7, B8, C17 and C18. Its content differs from year to year. Its purpose is by the study of the principles and methods of some of the great modern mathematicians like Cauchy, Riemann, Clebsch and Gauss in certain subjects like the theory of functions or the general theory of algebraic curves, to furnish an introduction to the realm of higher mathematics and to develop still further independence and power in sound mathematical reasoning.

Junior and Senior years, both semesters. 3 hours each.

Professor Brackett.

(Not given in 1917-1918.)

D25 and D26. ANALYTIC MECHANICS. Mathematical treatment of important principles in mechanics; applications to numerous problems; discussion of general application of analytic reasoning to other physical problems.

Junior and Senior years, both semesters. 3 hours each.

Professor Brackett.

(Not given in 1917-1918.)

D27 and D28. PROJECTIVE GEOMETRY. A deductive study of general projective geometry with attention to the foundations of geometry.

Junior and Senior years, both semesters. 3 hours each. IV.

Professor Brackett.

MILITARY TRAINING

A1 and A2. MILITARY DRILL.

Required of Freshmen, both semesters. 1 hour each. M and F, 8:15-9:10; W, 2:15-4:10.

Acting Professor Vogdes and Assistant.

B3 and B4. MILITARY DRILL.

Required of Sophomores, both semesters. 1 hour each. M and F, 8:15-9:10; W, 2:15-4:10.

Acting Professor Vogdes and Assistant.

B5 and B6. MILITARY DRILL.

Elective for Juniors and Seniors, both semesters. 1 hour
M and F, 4:15.

Acting Professor Vogdes and Assistant.

B13 and B14. MILITARY SCIENCE.

To be accompanied by Military Training B3 and B4, or B5 and
Sophomore, Junior, and Senior years, both semesters. 2 hours
each. Two sections, T, Th, VI, X.

Acting Professor Vogdes.

MUSIC**HISTORY AND THEORY OF MUSIC**

Courses in the History and Theory of Music are granted credit
on the same basis as other college studies, and proficient students
may major in either theoretical or applied music under conditions
arranged in consultation with the head of the department.

A1 and A2. ELEMENTARY MUSIC AND EAR TRAINING.

A course dealing with the rudiments of music, including
recitations, rhythm, intervals, scales and definitions of terms.
Extended work in ear-training, aiming to teach discriminative
listening. Elementary work in Harmony is undertaken in
the second semester. A text is used.

Three recitations to count as two hours.

Freshman and Sophomore years, two divisions, both semesters.
2 hours each. II, XIII.

Professor Lyman and Assistant Professor Allen.

B3 and B4. MUSICAL HISTORY AND APPRECIATION.

Recitations and recitations are given on the development of music
from its earliest stages. The history of church music, opera,
opera, and oratorio; biographical sketches of famous composers,
with description of their principal works. Recitations to aid in
appreciation, are given frequently. A text-book is used.

Sophomore year, both semesters. 3 hours each. XI.

Assistant Professor Allen.

B5 and B6. HARMONY. A study of intervals, scales, chord construction and their relation. An abundance of excerpts are examined. Especial emphasis is laid upon the harmonization of melodies, as well as practical application to the key-board of the principles involved. Creative work encouraged from the beginning. The text by Carolyn A. Schin is used.

Prerequisite: Music A1 and A2, and an elementary knowledge of the pianoforte.

Sophomore and Junior years, both semesters. 3 hours each. V, VI.

Assistant Professor Allen.

C7 and C8. COMPOSITION I. A study of Simple Counterpoint of all species in two, three and four voices. The aim is to develop technique in smooth voice leading. Creative work in the simpler forms of Free Composition is added in the second semester.

Prerequisite: Music B5 and B6.

Junior and Senior years, both semesters. 3 hours each. VI.

Assistant Professor Allen.

D9 and D10. COMPOSITION II. Original work leading up to the Sonata form constitutes the basis of this course.

Prerequisite: Music C7 and C8.

Junior and Senior years, both semesters. 3 hours each.

Assistant Professor Allen.

C12. MUSICAL APPRECIATION. Designed to enable students to understand and enjoy the different forms of musical composition. Lectures are supplemented by outside reading and abundant musical illustrations.

1 hour.

(Not given in 1917--1918.)

C13. ORCHESTRATION. A study of orchestral instruments, their possibilities and limitations, arranging of compositions for small orchestra, the theory and practice of conducting.

Designed especially to meet the needs of a student desiring State Certificate.

Junior and Senior years, first semester. 3 hours. XIII.

Assistant Professor Allen.

APPLIED MUSIC

A student is enrolled for credit only upon the written recommendation of the Chairman of the Examining Committee and the Head of the Department concerned, and upon the subsequent favorable action of the Classification Committee. This recommendation and action of the committee are based upon the degree of ability shown in proficiency tests. (See Music Bulletin.) Work in Applied Music must be accompanied or preceded by the theoretical courses A1 and B5, B6. Two half-hour lessons weekly are required as a minimum for which credit is allowed. Under these conditions applied work is rated as two hours for each semester. Not more than ten such hours may be counted toward the degree.

Voice—Professor Lyman and Miss Pasmore.

Organ—Assistant Professor Hartley.

Piano—Assistant Professor Hartley and Miss West.

Violin, Violoncello and Viola—Assistant Professor Staples.

PHILOSOPHY

In keeping with the requirements of those who plan to be graduate students of Philosophy, certain courses are offered, each semester, in which the spirit of independent research is encouraged, and methods of specialized study are within certain limits employed. Except by consent of the department, registration in these courses is limited to students whose major is Philosophy.

Prerequisites: Nine hours of Philosophy and Psychology, including C25 and C26.

B21. LOGIC. The course is designed to be an introduction to the essentials of reasoning. Stress is laid upon exercises in logical construction, the detection of fallacies,

on conception and classification. Induction and deduction and their relations, as employed in scientific research. Text, citations, lectures and written assignments.

Sophomore and Junior years, first semester. 3 hours. III.

Professor Parker.

B23. THE ELEMENTS OF ETHICS. The origin and development of moral ideas. The relation of these ideas and of their development to civilization, with especial reference to their bearing upon the relation of the individual to society. The problems considered are those of goodness, evil, duty, freedom, conscience, the nature of the self, and the supreme good. Lectures, required readings and theses.

Prerequisite: Psychology B1 and B2. Required of all not taking Philosophy C32.

Junior year, first semester. 3 hours. IV.

Professor Parker.

B24. THE ELEMENTS OF ETHICS.

Same as Philosophy B23.

Sophomore and Junior years, second semester. 3 hours. V.

Professor Parker.

C25. ANCIENT AND MEDIEVAL PHILOSOPHY. Lectures, readings of fragments of early Greek philosophers, and selected readings from the writings of Plato and Aristotle. An extended thesis treating of some fundamental problem of ancient philosophy. Text, Rogers' "A Student's History of Philosophy."

Junior and Senior years, first semester. 3 hours. VII.

Professor Parker.

C26. MODERN PHILOSOPHY. Lectures, and readings from Descartes, Leibniz, Locke, Hume, and Kant. A thesis dealing with some modern philosophical problem is required. Rogers' text. Rand's "Classical Philosophers." Reference made to Royce's "The Spirit of Modern Philosophy," and Calkins' "The Persistent Problems of Philosophy."

Junior and Senior years, second semester. 3 hours. VII.

Professor Parker.

C32. THE PRINCIPLES OF ETHICS. A course designed for more advanced students of philosophy.

May be substituted for Philosophy B23 by those students who make Philosophy their major, and likewise by other students with approved preparation. May also be taken as an elective by students who have completed B23 with A grade. Lectures and theses.

Junior and Senior years, second semester. 3 hours. IV.
Professor Parker.

D27. INTRODUCTION TO PHILOSOPHY. Designed to familiarize the student with the outlines, divisions and methods of procedure in the several branches of philosophical inquiry.

Junior and Senior years, first semester. 3 hours. II.
Professor Parker.

D28. METAPHYSICS. An inquiry for the fundamental conceptions of philosophy.

Junior and Senior years, second semester. 3 hours. II.
Professor Parker.

D29. PHILOSOPHY OF RELIGION. The origin and nature of religion. Its development as a corollary of civilization through stages approaching to the level of revelation and redemption. These stages considered with especial reference to their illustration by the religion of Israel and its culmination in Christianity.

Junior and Senior years, first semester. 3 hours.
Professor Parker.
(Not given in 1917-1918.)

D30. MODERN PHILOSOPHICAL PROBLEMS. An effort to state the prominent tendencies in present-day thinking, to relate them to their proper historical sources.

Junior and Senior years, second semester. 3 hours.
Professor Parker.
(Not given in 1917-1918.)

PHYSICAL EDUCATION

A course of Physiology and Hygiene, described under the Department of Physiology as A1 and A2. Applied Physiology and Hygiene required of all Freshmen. The courses are graded, systematic and progressive. Their purpose is to remedy ordinary physical defects, and develop endurance and co-ordination.

Courses A1 to C8, inclusive, and C31 and C32 are for men. Physical measurements are taken at the beginning and end of Freshman and Sophomore years, and are optional for Juniors and Seniors. They are designed primarily to determine vital strength and organic weakness, secondarily to determine muscular strength. The measurements obtained are plotted on anthropometrical tables to determine development and comparison with the average. Any individual who is below normal is given prescribed exercise.

A1 and A2. ELEMENTARY GYMNASTICS*. Calisthenics, U. S. A. Regulations without arms: dumbbell, wand and Indian club drills; exercise on horizontal bar, parallel bars, side horse, long horse, bucks, ladders, etc. The closing minutes of each class period are devoted to the teaching and playing of games. Two class exercises per week.

Freshman year, both semesters. $\frac{1}{2}$ hour each. T, F, at 4:15.
Assistant Professor Schott.

B3 and B4. ADVANCED GYMNASTICS*. This course follows Gymnastics A1 and A2, and takes up more advanced exercises, including mat work, tumbling, advanced apparatus work, and athletic and gymnastic dancing.

Required, Sophomore year, both semesters. $\frac{1}{2}$ hour each. T, F, at 5:15.

Assistant Professor Schott.

C5 and C6. SPORTS. Two periods of outdoor exercise in games or other exercises to be elected by the student in consultation with the director, with lectures on social hygiene. Required of those not electing Military Drill.

Junior year, both semesters. $\frac{1}{2}$ hour each. T, F, at 5:15.

Assistant Professors Schott and Nixon.

The men in athletics are, upon recommendation of the coach, excused from actual participation in gymnastics during the period covered by the particular sport in which they are engaged.

C7 and C8. SPORTS. Two periods of outdoor exercise in games or walking as in C5 and C6, with lectures on hygiene as related to heredity and eugenics.

Required of those not electing Military Drill.

Senior year, both semesters. $\frac{1}{2}$ hour each. T, F, at 5:15.

Assistant Professors Schott and Nixon.

C31 and C32. THEORY OF ATHLETICS. The various athletic sports, football, basketball, baseball and track athletics are discussed from the standpoint of coaching, training and officiating. Every student is given some practical work in the technique of coaching and officiating. The course is elective, and is especially designed for students who expect to coach high school athletics incidental to their teaching.

Open to Senior men only, both semesters. 2 hours each.

Assistant Professor Schott.

The work for women is at once educative and practical in aims, endeavoring not only to correct abnormalities of structure and function, but to prevent their occurrence. Physical and medical examinations are required of all entering students; the physical examination is repeated at the end of the year.

A11 and A12. GYMNASIUM PRACTICE. Two periods of gymnasium work.

Required, Freshman year. $\frac{1}{2}$ hour each. M, Th, at 3:15, or Th, at 4:15.

Assistant Professor Squire and Miss Spear.

A11' and A12'. OUTDOOR SPORTS. Two periods of outdoor sports, elected by the student subject to the approval of the director.

Required, Freshman year. $\frac{1}{2}$ hour each.

Assistant Professor Squire and Miss Spear.

B13 and B14. GYMNASIUM PRACTICE. A continuation of A11 and A12. Two periods, following the general arrangement of A11 and A12.

Required, Sophomore year. $\frac{1}{2}$ hour each. M, Th, at 5:15.

Assistant Professor Squire and Miss Spear.

B13' and B14'. OUTDOOR SPORTS. A continuation of A11' and A12'. Two periods following the plan of A11' and A12'.

Required, Sophomore year. $\frac{1}{2}$ hour each.
Assistant Professor Squire and Assistant.

C15 and C16. SPORTS. Two periods of outdoor sports selected by the student, subject to the approval of the director; from October 1 to June 1.

Junior year. $\frac{1}{2}$ hour each.
Assistant Professor Squire and Assistant.

C17 and C18. SPORTS. Two periods of outdoor sports in C15 and C16, with lectures on hygiene as related to heredity and eugenics.

Senior year. $\frac{1}{2}$ hour each.
Assistant Professor Squire and Assistant.

B19 and B20. FOLK AND NATIONAL DANCING. One period; from November 1 to May 1.

Elective for Freshmen and Sophomores. $\frac{1}{2}$ hour.*
Assistant Professor Squire.

C21 and C22. FOLK AND NATIONAL DANCING. One period; from November 1 to May 1.

Prerequisites: Physical Education B19 and B20, or their equivalent.
Elective for Sophomores, Juniors, and Seniors. $\frac{1}{2}$ hour.*
Assistant Professor Squire.

C23 and C24. AESTHETIC DANCING. One period; from November 1 to May 1.

Prerequisites: Physical Education C21 and C22, or their equivalent.
Elective for Juniors and Seniors. $\frac{1}{2}$ hour.*
Assistant Professor Squire.

*The half hour credit for these courses does not count toward the 126 credits required for graduation.

C25 and C26. GYMNASIUM PRACTICE. One period; November 1 to May 1.

Prerequisites: Physical Education A11 and A12, B13 and B14 or their equivalent.

Elective for Juniors and Seniors. $\frac{1}{2}$ hour.*

Assistant Professor Squire and Assistant.

Forty minutes constitutes a period. B19 and B20, C21 and C22, C23 and C24, C25 and C26, or Swimming may be substituted for a period of out-door exercise. Hours and credits given for these courses may not be used in the requirements for graduation.

C33 and C34. PLAY GROUND METHODS. Theory and philosophy of play. Equipment, construction and management of city and rural play grounds.

Elective, one hour each week. Students taking this course may be required to teach the various playground activities.

Junior and Senior years, both semesters. 2 hours each.

Assistant Professor Schott.

Laboratory fee, \$2.50 each.

PHYSICS

B1 and B2. GENERAL PHYSICS. Mechanics, Sound and Heat. Lectures, recitations and laboratory work. This course is designed for students desiring to take one year of work in general physics and may be successfully pursued without previous course in the subject.

Prerequisites: Algebra and plane geometry. Class room, 3 hours a week; laboratory, one exercise a week.

Freshman and Sophomore years, first semester. 4 hours. Class room, IV; laboratory T, 1:15-4:10.

Professor Hitchcock.

Laboratory fee, \$4.00 each.

C3. MECHANICS OF SOLIDS AND FLUIDS. Lectures and recitations.

Prerequisites: A good working knowledge of elementary mathematics, including analytic geometry and calculus, and a course in secondary school physics. Required in all engineering courses.

Sophomore and Junior years, first semester. 3 hours. VIII

Professor Hitchcock.

D4. HEAT, SOUND AND LIGHT. Continuation of Physics

Sophomore and Junior years, second semester. 3 hours. VIII.
Professor Hitchcock.

D5 and D6. MAGNETISM AND ELECTRICITY. Lectures and recitations. Considerable time is given to the study of dynamo-electric machinery, and to the solution of problems in engineering practice.

Prerequisites: In addition to those for C3 and C4, familiarity with the processes of the differential and integral calculus, and differential equations.

Junior and Senior years, both semesters. 3 hours.
Professor Hitchcock.

(Not given in 1917-1918.)

Courses C3, D4, D5 and D6 are designed to meet the requirements of the best engineering schools.

D9 and C10. PHYSICAL MEASUREMENTS. An exposition of the theory and methods of physical measurements; instruction and practice in the adjustment and use of instruments of precision in the various branches of the subject.

Junior and Senior years, both semesters. 1½ hours.
Professor Hitchcock.

Laboratory fee, \$4.00 each semester.

(Not given in 1917-1918.)

D11. ADVANCED MAGNETISM AND ELECTRICITY.

Lecture hall, three hours a week; laboratory, one exercise a week.
Senior year, first semester. 4 hours.

Professor Hitchcock.

Laboratory fee, \$4.00.

D13 and D14. APPLIED MECHANICS. Same as Engineering Mechanics D13 and D14.

Junior and Senior years, both semesters. 3 hours each.
Assistant Professor Belcher.

PHYSIOLOGY

A1 and A2. APPLIED PHYSIOLOGY AND HYGIENE. general course in the essentials of personal hygiene, such brief excursions into the field of physiology as necessary to an understanding of the hygienic principles involved. Supplementing this study of the problems of the individual, there is included a survey of the principles of public hygiene and sanitation, and a brief résumé of the approved measures concerned in first aid to the injured.

Required of all Freshmen, both semesters. 1 hour each. F, Assistant Professors Schott and Squire.

B11 and B12. PUBLIC HYGIENE. Advanced course series of lectures on the principles and requirements of public sanitation, and the problems of general morbidity and mortality.

Required of all Juniors.

Associate Professor Stoughton.

B13 and B14. PROBLEMS OF HEREDITY AND EUGENICS AND RELATED QUESTIONS OF PERSONAL AND PUBLIC HYGIENE. Advanced course.

Required of all Seniors.

Associate Professor Stoughton and Assistant Professor Squire.

B3 and B4. ANATOMY AND PHYSIOLOGY. Human and comparative. Lectures and laboratory work. Parts of organs studied and compared with the same in the lower vertebrates. Azou models, preserved specimens and dissections, and skeletons are used. Careful drawings by each student of sections, tissues and organs. (Gray, Quain, Stevens, Howells, Mivart, Reighard, Jennings, and other works for reference.)

Class room, two hours a week; laboratory, one exercise a week.

Sophomore year, both semesters. 3 hours each. Class room, F, IX; laboratory, Th, 1:15-4:10.

Assistant Professor Schott.

Laboratory fee, \$3.00.

D5. HISTOLOGY. Vertebrate. The microscopic study of cells, tissues and organs of man and the higher vertebrates. Special attention given to methods. Those intending to study medicine after graduation will find this course and the course in embryology very helpful.

Prerequisite: Physiology B3 and B4.

Junior and Senior years, first semester. 3 hours.

Professor Hilton.

Laboratory fee, \$8.00.

D6. HISTOLOGY. A continuation of D5, including the consideration of some special methods and problems.

Prerequisite: Physiology D5.

Junior and Senior years, second semester. 3 hours.

Professor Hilton.

Laboratory fee, \$6.00.

D7. EMBRYOLOGY. Comparative vertebrate embryology. Study of the development of vertebrates up to and including the formation of adult organs. The eggs of amphibia, embryos of birds and mammals, furnish the material for study.

Prerequisite: Physiology B3 and B4, or Zoology B11 and B12.

Junior and Senior years, first semester. 3 hours.

Professor Hilton.

Laboratory fee, \$8.00.

(Not given in 1917-1918.)

D8. EMBRYOLOGY. A continuation of D7. Some attention may be given to special methods and problems.

Prerequisite: Physiology D7.

Junior and Senior years, second semester. 3 hours.

Professor Hilton.

Laboratory fee, \$6.00.

(Not given in 1917-1918.)

PSYCHOLOGY AND EDUCATION

B1 or B2. ELEMENTS OF PSYCHOLOGY. A general view of the field of psychology, its aim, methods, values, relations and its application to practical conduct. Class and individual experiments to illustrate and supplement the text. Text-book, lectures, recitations and laboratory work.

Required in all courses.

Sophomore or Junior year, either semester. 3 hours. V.
Professor Ewer.

B3 and C4. PRINCIPLES OF PSYCHOLOGY. This course is intended for those students who desire a more extended study of psychology along the lines of B1. More emphasis is laid upon the comparative study of different systems upon the results of experimentation. Text-book, lectures, reports and laboratory work.

Those who take this course fulfill the three-hour requirement in Psychology and get three hours in addition.

Sophomore or Junior year, both semesters. 3 hours each. I.
Professor Ewer.

C7. EDUCATIONAL PSYCHOLOGY. A course in the practical application of psychology to the educative process, theories of the functions of education and the laws which govern the educative procedure. The topics are treated in the light of modern psychological and physiological investigations, and the course is intended for those going into professions of teaching and the ministry. Text-book, lectures and assigned readings.

Prerequisite: Philosophy B1.

Junior and Senior years, first semester. 3 hours. VI.
Professor Ewer.

C8. APPLICATIONS OF PSYCHOLOGY. A study of the bearing of psychology on certain practical aspects of life, especially health and disease, work and recreation. Particular applications to the fields of business, law and the

y will also be considered. Text-book, lectures and collateral readings.

Prerequisite: Psychology B1 or B3.

Junior and Senior years, second semester. 3 hours. III.

Professor Ewer.

C11 and C12. HISTORY OF EDUCATION. This course traces the methods and ideals of educational thought and practice as developed in various nations and periods. The problems and practices of the present receive special attention. Text-book and assigned readings.

Junior and Senior years, both semesters. 3 hours each. VIII.

Professor Norton.

C16. ADVANCED PSYCHOLOGY. The Psychology of Suggestion, a study of the phenomena of suggestion in normal and abnormal individual and social life. Text-book, lectures, collateral reading and theses.

Prerequisite: Psychology B1 or B3.

Junior and Senior years, second semester. 3 hours.

Professor Ewer. (Not given in 1917-1918.)

C12. SOCIAL PSYCHOLOGY. The psychological principles underlying social order and progress; the social instincts; forms of social suggestion; the psychology of the individual and of organized groups; applications of principles to contemporary social problems.

Junior and Senior years, second semester. 3 hours. VI.

Professor Ewer.

ROMANCE LANGUAGES

FRENCH

1. ELEMENTARY COURSE. Aldrich and Foster's Elementary French. Reading of easy prose and poetry; grammatical analysis, composition and dictation.

Freshman and Sophomore years, five divisions, first semester; one division, second semester. 3 hours. First semester, I, II, V, VIII, second semester, IV.

Assistant Professors Pecker, Matlock, Miss Pasmore, Mr. Wright.

A2. MODERN PROSE AND DRAMA. Continuation of French A1. Selected readings from Daudet, Coppée, Scribe and others. Grammatical reviews, composition, dictation; sight reading.

Freshman and Sophomore years, three divisions, second semester. 3 hours. I, II, V, VIII, IX.

Assistant Professors Pecker and Matlock, Miss Pasmore, Wright.

B3. FRENCH NOVEL OF THE NINETEENTH CENTURY. Reading of selected masterpieces of De Vigny, Balzac, Stendhal, Daudet and others; lectures, essays and composition.

Prerequisite: French A2 or equivalent.

Freshman and Sophomore years, three divisions, first semester. 3 hours. II, III.

Assistant Professor Pecker and Miss Pasmore.

C4. FRENCH NOVEL OF THE NINETEENTH CENTURY. Continuation of French B3.

Prerequisite: French B3 or equivalent.

Freshman and Sophomore years, second semester. 3 hours. II, III.

Assistant Professor Pecker and Miss Pasmore.

B3'. GRAMMATICAL ANALYSIS. A course in French grammar required of those making Romance Languages major.

Prerequisite: French A1 and A2.

Freshman and Sophomore years, first semester. 2 hours. F, VII.

Assistant Professor Pecker.

C4'. COMPOSITION AND DICTION. Required of those making Romance Languages their major.

Prerequisite: French B3'.

Freshman and Sophomore years, second semester. 2 hours. F, VII.

Assistant Professor Pecker.

5. CLASSIC DRAMA. Reading of Corneille's *Polyeucte*, Racine's *Athalie*, Molière's *Tartufe*; essays and sight reading continued; lectures upon the literary history of the period.

This course, and all to follow, are conducted entirely in French. Alternates with French D7.

Prerequisites: French B3 and C4.

Junior and Senior years, first semester. 3 hours.

Associate Professor Jones.

(Not given in 1917-1918.)

6. FRENCH PROSE OF THE SEVENTEENTH CENTURY. Selections from Bossuet, Descartes, Pascal, La Bruyère, Le. de Sévigné, etc.; essays and lectures upon the history of French literature, continued. Alternates with French D8.

Prerequisites: French B3 and C4.

Junior and Senior years, second semester. 3 hours

Associate Professor Jones.

(Not given in 1917-1918.)

7. LITERATURE OF THE EIGHTEENTH CENTURY. Selections from Montesquieu, Voltaire, Rousseau, Beaumarchais, etc.; essays and sight reading; lectures upon the literary history of the period. Alternates with French D5.

Prerequisites: French B3 and C4.

Junior and Senior years, first semester. 3 hours.

Associate Professor Jones.

(Not given in 1917-1918.)

8. ROMANTIC SCHOOL. Readings from Hugo, Alfred Musset, Lamartine, etc.; significance and influence of the Romantic movement; essays and lectures upon the history of French literature continued.

Prerequisites: French B3 and C4. Alternates with French D6.

Junior and Senior years, second semester. 3 hours.

Associate Professor Jones.

(Not given in 1917-1918.)

D9. CONTEMPORARY FRENCH NOVEL. Loti, Bou
Rolland, de Coulevain, Bazin, Prévost.

Prerequisites: French B3 and C4.

Junior and Senior years, first semester. 3 hours. I.

Assistant Professor Pecker.

D10. CONTEMPORARY FRENCH NOVEL. (Continued
France, Barrés, Tinayre, the Tharauds, Boylesve, Mille.

Prerequisites: French B3 and C4.

Junior and Senior years, second semester. 3 hours. I.

Assistant Professor Pecker.

D7'. PHONETICS. A study of French sounds. Ge
French Pronunciation; Passy, Lectures variées mise
transcription phonétique; Passy-Rambeau, Chreston
française.

An advanced course, required of those specializing in French
must be accompanied by French D9.

Junior and Senior years, first semester. 2 hours. T, Th, V

Assistant Professor Pecker.

D8'. ADVANCED COMPOSITION AND CONVERSATION.
supposes and continues Phonetics D7'.

Required of those specializing in French, and must be accom
by French D10.

Junior and Senior years, second semester. 2 hours. T, Th,

Assistant Professor Pecker.

ITALIAN

B31. ELEMENTARY COURSE. Young's Italian Gran
De Amicis' Cuore; Goldoni's La Locandiera. Drill in
nunciation; composition and dictation.

Junior and Senior years, first semester. 3 hours.

Associate Professor Jones.

(Not given in 1917-1918.)

32. **ELEMENTARY COURSE.** Continuation of Italian . Manzoni's *I promessi Sposi*; Silvio Pellico's *Le mie prigioni*; short stories and plays from modern authors. Student's Italian Prose Composition; conversation and dictation.

Junior and Senior years, second semester. 3 hours.

Associate Professor Jones.

(Not given in 1917-1918.)

33. **ITALIAN CLASSICS.** Boccaccio, Petrarch, Ariosto, Tasso. Lectures upon the history of Italian literature.

Prerequisite: Italian B32 or equivalent.

Junior and Senior years, first semester. 3 hours.

Associate Professor Jones.

(Not given in 1917-1918.)

34. **CLASSICS (Continued).** Dante's *Inferno*, with selections from the *Purgatorio* and *Paradiso*. Flamini's study of the *Divine Comedy*. Essays and lectures continued.

Prerequisite: Italian B32 or equivalent.

Junior and Senior years, second semester. 3 hours.

Associate Professor Jones.

(Not given in 1917-1918.)

SPANISH

21. **ELEMENTARY COURSE.** Hill & Ford's *Spanish Grammar*. Padre Isla's *Gil Blas de Santillana*. Conversation, composition and dictation.

Sophomore and Junior years, first semester. 3 hours. IV.

Mr. Wright.

22. **MODERN PROSE AND DRAMA.** Alarcón's *El Capitan Veneno* or *El Sombrero de tres Picos*; Echegaray, *Ora ó santidad*; Bretón; *Quién es ella?* Becquer's *Tales Poems*. Conversation and dictation; Umphrey's *Spanish Prose Composition*.

Sophomore and Junior years, second semester. 3 hours. IV.

Mr. Wright.

C23. CONTEMPORARY SPANISH NOVEL. Selections from the works of Galdós, Valdés, Blasco, Ibáñez and other authors; Essays and résumés in Spanish; conversation based upon Bonilla's Spanish Daily Life.

Prerequisites: Spanish B21 and B22, or equivalent.

Sophomore and Junior years, first semester. 3 hours. VI.

Mr. Wright.

C24. CONTEMPORARY SPANISH NOVEL. Continuation of C2. Reading from Valera, Pereda, Pardo Bazan, and other authors; Lectures in Spanish; essays and résumés.

Sophomore and Junior years, second semester. 3 hours. VI.

Mr. Wright.

C23' and C24'. COMPOSITION AND COMMERCIAL CORRESPONDENCE.

Prerequisites: Spanish B21 and B22. Required of those specializing in Spanish. A course in advanced composition and epistolary usages.

Sophomore and Junior years, both semesters. 1 hour each. F.

Mr. Wright.

D25. THE CLASSIC DRAMA. Selections from Lope de Vega, Tirso de Molina, Calderón de la Barca. Lectures upon the history of Spanish literature. This course, as well as D26, conducted entirely in Spanish.

Prerequisite: Spanish C24 or equivalent.

Junior and Senior years. 3 hours. VII.

Mr. Wright.

D26. SPANISH PROSE OF THE SIXTEENTH AND SEVENTEENTH CENTURIES. Readings from Cervantes; El Quijote; and the Novelas Ejemplares; the picaresque novel; Laza de Tormes. Lectures continued.

Prerequisite: Spanish C24 or equivalent.

Junior or Senior years, second semester. 3 hours. VII.

Mr. Wright.

D27 and D28. CONTEMPORARY LITERATURE.

Junior and Senior years, both semesters. 1 hour each.

Mr. Wright.

SOCIOLOGY

(See *Economics and Sociology*)

ZOOLOGY

1. GENERAL ZOOLOGY. Lectures and laboratory work. Lists of classes and phyla of animals dissected and studied. Careful drawings made of parts and organs. Constant use of the microscope. The large collections of the museum used for illustrative purposes. (Parker, Haswell, Brooks and other books of reference.)

Class room, two hours a week; laboratory, one exercise a week. Prerequisites: Biology A1 and A2, or equivalents.

Eleventh and Junior years, first semester. 3 hours. Class room, M, VIII; laboratory, M, 3:10.

Professor Hilton.

Laboratory fee, \$5.00.

2. VERTEBRATE ZOOLOGY. A broad treatment of the comparative anatomy and organology of vertebrates, based on detailed work with representative types of the fishes, amphibians, reptiles, birds and mammals. Laboratory work with skeletons and preserved specimens.

Class room, two hours a week; laboratory, one period.

Prerequisites: Physiology B3 or Zoology B11.

Eleventh and Junior years, second semester. 3 hours. T, Th, laboratory, M, 1:30-3:10.

Professor Hilton.

Laboratory fee, \$5.00.

3. ENTOMOLOGY. The anatomy and physiology of insects studied and their life history traced. Insects reared in the laboratory; their transformation studied; species of all orders identified by use of laboratory manuals. A good collection of domestic and exotic insects is at the command of the student. Laboratory and field work made prominent.

Class room, two hours a week; laboratory, one exercise a week.

Prerequisite: Biology A1, or Physiology B3, or Zoology B11.

Sophomore, Junior, and Senior years, second semester. 3 h
Class room, M, W, VII; laboratory, T, or Th, 1:15-3:10.

Professor Hilton.

Laboratory fee, \$5.00.

C31. SYSTEMATIC INVERTEBRATE ZOOLOGY. Local gr
of invertebrates exclusive of insects are studied in the
and laboratory. The particular groups considered
Diplopods, chilopods, arachnids.

Prerequisite: Zoology B11 or B18.

Sophomore or Junior year, first semester. 3 hours. Lecture
hour a week, Th, II; laboratory and field work, two periods a w
laboratory, M, W, 1:15-3:10.

Professor Hilton.

Laboratory fee, \$5.00.

C32. SYSTEMATIC VERTEBRATE ZOOLOGY. Local v
brates, especially birds, but also amphibia, reptiles, and r
mals studied in the laboratory and in the field.

Prerequisite: Zoology B11.

Sophomore or Junior year, second semester. 3 hours. Le
one hour a week, Th, II; field and laboratory work, two peri
week; laboratory, M or W, 1:15-4:10.

Professor Hilton.

Laboratory fee, \$3.00.

D33. COMPARATIVE NEUROLOGY. Comparative ana
of the central nervous system of vertebrates. The la
tory work consists of special dissections and the stud
microscopical preparations.

Prerequisites: Zoology B11 and B12, or Physiology B3 and

Junior and Senior years, first semester. 3 hours. Lecture
hour a week; laboratory, two periods a week.

Professor Hilton.

Laboratory fee, \$5.00.

3. ADVANCED ZOOLOGY. A study of special groups of invertebrates or vertebrates well represented in California on the West Coast. A continuation of Zoology B11 or B18, with chiefly laboratory and field work.

Prerequisite: Zoology B11 or B18.

Junior and Senior years, first or second semester. 2 or 3 hours. Professor Hilton.

4. BIONOMICS. An introduction to modern discussion of evolution and modern experimental and statistical evidence in genetics, heredity and eugenics. A general treatment of the biological bases of plant and animal breeding, and of human evolution. A course of lectures, with assignments and prescribed readings.

Prerequisite: One year of biological work.

Junior and Senior years, second semester. 3 hours. I. Professor Hilton.

5 or D16. ADVANCED ZOOLOGY. A continuation of Zoology C13.

Prerequisite: Zoology C13. Field work and laboratory.

Junior and Senior years, either semester. 3 hours.

Professor Hilton.

Laboratory fee, \$7.00.

19 and D20. SPECIAL ENTOMOLOGY. Detailed investigations into the anatomy, life histories and economic relations of some of the groups of insects most prejudicial to the interests of mankind. Designed especially for those students intending to become growers, planters, economic entomologists, or doctors of medicine.

Prerequisites: Zoology B11 and B18.

Junior and Senior years, first and second semester. 3 hours each.

Field work and laboratory.

Professor Hilton.

Laboratory fee, \$7.00.

ADMINISTRATION

ADVISERS

Advisers are assigned for each of the College classes. They should be consulted by the students at registration for their choice of studies and plans for College work. Their counsel is also available in any other matters of personal interest in which the student may feel it would be for his benefit.

REGISTRATION

All students are required to register on one of the regularly announced days of registration preceding the opening of class work of each semester. A fee of two dollars is charged for later registration and a payment of one dollar for change in the list of subjects chosen. This latter payment is remitted in the case of new students registering for the first time, provided the changes are made within a week of the opening day of the registration period.

Students are admitted only to those courses for which they are formally registered.

MATRICULATION

Matriculation implies the meeting of all entrance requirements and the proven ability to carry college work. To the end the standing of all new students is provisional until they have been in residence for one semester. At that time those are matriculated who have shown themselves in accordance with the spirit of the College, who have done a satisfactory quality of work during their semester of residence and whose entrance units are acceptable.

ELECTION OF COURSES

on or before the first Saturday in January after the Christmas recess, and the first Saturday in June, all resident students must fill out in consultation with their class advisers a schedule listing their choice of subjects for the following semester.

Changes from this schedule may be made upon the payment of a fee of one dollar. Failure to prepare such a schedule at the appointed time subjects the student to a fee of two dollars. Students may not select less than twelve credits of work without the special permission of the Classification Committee.

PUBLIC ASSEMBLIES

Devotional exercises conducted by the President, the members of the faculty in turn, or by some invited guest, are held in the chapel Monday, Wednesday and Friday mornings, and all students are expected to be present.

On Thursday morning the regular and called meetings of the Associated Students are held from time to time. On Friday morning opportunity is afforded the advisers to meet with their respective classes for the presentation and discussion of the problems that ordinarily arise in the life of the undergraduate, as well as of those which in a more general way concern the student in his relations to the world at large. Attendance upon the Sunday morning service in the Claremont Church is expected except in cases where permission is granted to attend services elsewhere. Such permission will be granted on request.

REPORTS

A record of the scholarship and deportment of each student is kept, and deficient students are reported to the Registrar. Special reports are made at or near the Thanksgiving

and Spring recesses ; notification is sent to the parents of students reported as deficient then, or at the end of semester. Grades will be sent at any time upon request to parents.

The grade of scholarship is determined by the daily work of the class-room supplemented by frequent test reviews and by final examinations.

The aim is to encourage faithfulness and regularity in work rather than spasmodic effort to meet some single

PHYSICAL ATTENTION

The physical care of students is a matter of special concern to the College and the advantages of unusual attention and opportunity are offered. The climate of Southern California offers an out-of-door life the year around. Oversight is given to open-air athletics in all seasons. A regular physician is on the faculty of the College under whose direction each student on entering has a physical examination. Regular work in Physical Culture is prescribed throughout the college years, and courses in Physiology and Hygiene are given. A large swimming pool is provided, access to which is free for all students, subject only to a semi-annual physical examination. The medical advice of the College physician is ordinarily available free of charge to all students, subject to certain conditions of hours and location of residence, the College meeting these bills ; providing that all nursing, surgery, dressing, and medicines are at the expense of the ill or injured. *The College, however, reserves the right to discontinue this individual medical service at any time without previous notice.* As a natural result of all this attention the health of the College is such as to give special assurance to all considering attendance at Pomona.

GENERAL REQUIREMENTS

Students are expected to be loyal to the spirit and purpose of the institution and to maintain regular attendance on all college appointments. Any who fall below grade in scholarship or who for any reason do not prove desirable members of the student body, may be dismissed without specific charges.

It is urgently pointed out to both students and parents that the value of a college education consists in no small degree in fullest participation in the college atmosphere and life. It is important, therefore, that all absence through the college should be avoided. Some of the most important of the college values are lost by absences on Saturday and Sunday, which days are centered particular and vital phases of the college life, and it is therefore urged that over-Sunday absences at home or elsewhere be avoided.

The use of tobacco is disapproved and discouraged at all times.

A copy of the Circular of Information may be obtained by application to the Registrar. It should be in the hands of all students.

EXPENSES

ROOMS. Lists and descriptions of rooms available for students are kept at the Business Office, for women students at Sumner Hall. Furnished rooms outside the College buildings are rented at prices ranging from twenty to forty-dollars for the semester. Students are permitted to room at places approved by the faculty.

To avoid misunderstanding between students and house-owners, it is advised that agreements regarding rooms be put in written form. Unless written agreement to the contrary is made, it will be assumed that rooms are rented for one semester.

Change of rooms is made only by permission of the faculty.

DORMITORIES—*Sumner Hall.* Women not living at their own homes, unless excused by the faculty, are expected to have a room in Sumner Hall, which accommodates seventy. It is a commodious and pleasant hall, where the young women come under the direct care of the Dean of Women. In addition to the parlors, which are open to the students for the reception of their friends, there is also on the first floor a large and attractive recreation hall.

Sumner Hall is well equipped with all modern conveniences, including electric lights, steam heat, baths, and laundry furnished with stationary tubs and electric irons for the use of roomers.

There are both single and double rooms, which are lighted and ventilated. Each room is provided with necessary furnishings, including rug for the floor. The articles to be supplied by the students are towels, and linens and covers for a single bed.

Careful attention is given to the health of the young women residing in the Hall. Illness is rare, yet for such cases as occur, there is provided, opening directly from the matron's room, a pleasant, sunny rest-room, where patients are given the best of care.

Rooms in Sumner Hall are rented for the College year, each occupant paying from fifty to eighty dollars, according to the location of the room and the number of occupants. The Hall is closed during the Christmas and Spring vacations. A deposit of five dollars is necessary to secure a room in the Hall, and should accompany the application. Rooms are assigned in order of application. The deposit fee is credited on the rent of the room.

Information concerning the dimensions of rooms, number of windows, and similar matters, may be obtained at the

office. The Hall is opened on the Saturday before the beginning of the College year and closed the Saturday after commencement.

SMILEY HALL. This dormitory for men has both single rooms and suites of three rooms accommodating two students. The dormitory has all modern conveniences and is completely furnished. The only articles to be provided by students are towels, and linen and covers for a single bed. All rooms are equally desirable, the basis of choice in most cases being one's preference for the eastern or western out-

rooms in Smiley Hall are rented for the College year, each student paying sixty dollars. In case of withdrawal because of sickness an equitable adjustment of rent will be made.

These terms do not include the use of the dormitory during the Christmas and Spring vacations, when the Hall will be closed, unless a number desire to remain, in which case the cost of keeping the building open will be an additional charge. Damage to rooms will be charged to the occupants. A deposit of five dollars is necessary to secure a room, and must accompany the application. This amount will be refunded as a breakage fee from which deductions will be made for all individual and communal damages to the building, the balance being returned at the end of the year. The dormitory is opened on the Saturday before the beginning of the College year and closed the Saturday after Commencement. The College reserves the right to dismiss from the dormitory without rebate any student who has shown himself a disturbing or undesirable occupant.

BOARD. In the College Commons, an unusually attractive and well equipped dining-room in the Claremont Inn, provision is made for the boarding of students under the direct management of the College. A representative committee of

students and faculty cooperate in maintaining satisfactory conditions. The rates are the lowest consistent with quality of food and service, the approximate cost for 1917 having been one hundred and sixty-eight dollars.

The Pomona College spirit is due in no small measure to the common dining hall. There the students meet in pleasant surroundings, are waited upon by companions in study, discuss together college topics, join in enthusiastic backing of college teams and glee clubs and have favorable opportunities for forming close and lasting friendships. For these reasons and for its unifying influence on college life, the faculty regard it as exceedingly desirable that students should live at the Commons.

Those wishing to board at other approved places may do so by permission of the faculty, but such permission is rarely be given to those living in the College buildings.

SUMMARY OF EXPENSES—The necessary expense for a College year, exclusive of fees for special courses and other expenses which are purely personal, varies from \$275 to \$300. The exigencies of the times may demand an increase in college rates for 1918-1919. Bills are due each semester in advance and must be paid upon registration. If parents desire bills to be sent home, written request should be made before the beginning of a semester.

No student will be retained in the institution or given honorable dismissal whose bills are not paid or arranged for payment.

TUITION

All tuition bills must be paid at the beginning of each semester. Until this has been done cards entitling the student to admission to classes will not be issued.

The regular charge for tuition is composed of two items: a General Charge, uniform in amount, which is required of

students, and an Instruction Charge, varying with the amount of work taken.

GENERAL CHARGE

Required of all students, per semester (18 weeks).....\$17.50

INSTRUCTION CHARGE

In all branches there is a further Instruction Charge varying according to the number of Credit Hours assigned to each course. The normal amount of work varies from 16 to 18 hours.

For each credit hour taken other than in applied music or art, per semester (18 weeks).....\$ 2.00
 For each credit hour in applied music, per semester..... 25.00
 For each credit hour in applied art, per semester..... 12.50
 One credit hour in music covers a half hour private lesson per week per semester. Work is offered in piano, voice, organ, violin and cello.

One credit hour in art covers one two-hour class lesson per week per semester. Work is offered in charcoal, water color and oil. An additional charge as indicated is made for the following work:
 Drawing and Ink, one lesson each week for 9 weeks.....\$ 5.00
 Speech Class..... 1.00

Students may register for applied music and art at any time. Such students, if they enter during a semester, should consult the Registrar as to charges.

Visitors not regularly enrolled are charged a minimum fee of five dollars and an extra fee of one dollar an hour for work in excess of three hours.

FEES

Diploma fee, \$5.00.

Physics and Chemistry, deposit for breakage, \$5.00.

Laboratory fees range from \$4.00 to \$15.00. The exact

*These charges are made whether or not the work is credited towards a degree.

fee for a given course is stated in connection with the description of that course under Departments of Instruction advanced courses only does it exceed \$10.00.

Practice fees for the use of college pianos and organs

Piano

One-half hour daily (students of Voice only), per semester....

One hour daily, per semester.....

Two hours daily, per semester.....

Three hours daily, per semester.....

Pedal Piano

Three hours weekly, per semester.....

Practice Organ

Three hours weekly, per semester.....

Six hours weekly, per semester.....

Large Organ

One hour weekly, per semester.....

(Advanced pupils only.)

RETURN OF TUITION

The General Charge of \$17.50 is retained from the tuition of students withdrawing within two weeks subsequent to the first day of registration of any semester. After that time there is no refunding of any part of the tuition either for courses dropped or for failure to complete a semester's attendance, except that one-half of the Instruction Charge and the Additional Charge, if any, is refunded to any leaving college before the middle of any semester on account of illness.

For courses dropped after October 15th no refund is allowed.

HONORS AND PRIZES

COMMENCEMENT EXERCISES

The honor of speaking on Commencement Day is awarded five members of the graduating class who have distinguished themselves in scholarship and who possess literary and oratorical ability.

THE PHI BETA KAPPA SOCIETY

A chapter of the national scholarship honor society, Phi Beta Kappa, was established at Pomona College, March seven, 1914. Upperclassmen "who are of good moral character, who are candidates for the degree of Bachelor of Arts, and who are distinguished for breadth of culture and excellence of scholarship," are eligible to membership.

FINAL HONORS AT GRADUATION

Those students who have two hundred or more credits are graduated with the honor *cum laude*; those who have two hundred and fifty or more credits are graduated with the honor *magna cum laude*; and those who have three hundred or more credits are graduated with the honor *summa cum laude*.

SCHOLARSHIP HONORS

Honors for scholarly attainment are awarded at the end of each semester to matriculated students, candidates for the bachelor of arts degree, as follows:

High Honors are awarded to those who have attained an average of A grade.

General Honors are awarded to those who fall short of an average of A grade by not more than the equivalent of a B grade in a three-hour subject.

Departmental Honors are awarded to those who attain a double A grade in any subject.

Honors are granted in no case where a student has a grade below B in any subject.

PRIZES

The following prizes are offered for proficiency in the various departments:

THE DOLE PRIZES. A prize debate, open to the Sophomores, upon some subject selected by the faculty, is arranged for the first half of the second semester. First and second prizes of ten and five dollars respectively, established by the late Mr. J. H. Dole, in memory of his brother, Mr. W. B. Dole, are endowed by Mr. J. Albert and Mrs. A. M. Dole.

THE MUDGE LATIN PRIZES. Prizes for excellence in Latin offered to Sophomores completing Latin D13 and D14. First and second prizes of ten and five dollars respectively are endowed by friends of the College.

THE LLEWELLYN BIXBY MATHEMATICS PRIZE. A prize for excellence in Analytic Geometry and Calculus; open to all students completing Mathematics C17 and C18. A prize of ten dollars is given by Mr. Llewellyn Bixby.

THE KINNEY PRIZES. A prize declamation contest, open to members of the Freshman class, occurs toward the end of the semester. First and second prizes of ten and five dollars, respectively, are given by Mrs. H. N. Kinney.

THE VAILE PRIZES. Prizes for the best essay or oration on a general subject of Agriculture in Southern California; open to Junior and Senior classes. First and second prizes of ten and five dollars, respectively, are endowed by Mr. Charles S. Vaile.

THE LORBEER PRIZES. Prizes for the best essay on the subjects "How to Keep Well"; open to all who take the course in Anatomy and Physiology. First and second prizes of fifteen and ten dollars, respectively, are given by Dr. Thomas L. Lorbeer, '03.

THE MONCRIEFF ASTRONOMY PRIZE. A prize given to the student in the first year course in Astronomy, taken regularly in class, who shows interest in the study and proficiency in the observatory work.

ated by the best notebook kept in accordance with the teacher's
estion. A prize of ten dollars is given by Miss Flossie C.
crieff, '11.

HE GEORGE A. GATES PRIZE. A prize given for the best paper
one of five subjects, dealing with social betterment, selected by
teachers of History and the social sciences. A prize of twenty-
dollars is endowed by certain Alumni and other friends of Dr.
S.

HE HAGER PRIZES. Prizes for best three essays on a foreign
ionary subject, open to all students. Prizes of five dollars each
endowed by Mr. and Mrs. C. R. Hager.

SCHOLARSHIPS AND BENEFICIARY

The income of certain funds is used toward paying tuition fees of students who are in pecuniary need, and authorization of the trustees, is distributed annually through a committee of the faculty. Scholarship aid is given on students who are or intend to become candidates for a degree from Pomona College, who maintain a high standard of honor, who are economical in their habits, who do not use tobacco, who are regular in their attendance upon college exercises, and whose scholarship meets the following conditions: The earning in each semester of the Freshman year of at least twelve credits; in each subsequent semester at least fifteen credits.

Applicants for aid who have not yet entered college should forward to Acting Dean E. P. Bartlett, Chairman of the Committee on Scholarships, a formal application accompanied by two letters, one from parent or guardian and the other from principal or teacher, giving information concerning need, character and attainments. They should also submit a certified statement of their scholastic record. All applications for aid must be renewed annually on or before September first.

Aid may be withdrawn at any time from students who prove not to have conformed to the conditions, and is permanently withdrawn after the second forfeiture due to standing or unsatisfactory deportment.

Recipients of scholarship aid may be called upon to represent the College in ways that do not interfere with their studies.

Awards are made from the income of the following funds:

THE LYDIA PHELPS MEMORIAL FUND, \$4,000. Given by Hiram Phelps of Ontario, California, in memory of his wife.

THE AGNES K. CRAWFORD MEMORIAL FUND, \$1,000. Given by David R. Crawford and William Crawford of Pomona, California, in memory of their mother.

THE JOHN D. POTTER MEMORIAL FUND, \$2,000. Given by Mrs. S. T. Potter of Westboro, Massachusetts, in memory of her husband.

1000. Given by Mrs. Loraine H. Page of Pomona, California. (\$3,000 of this may at some time be used for other purposes.)

THE FRANCIS BANCROFT MEMORIAL FUND, \$1,500. Given by Mrs. James T. Ford of Los Angeles, California, in memory of her father.

1500. Given by Rev. James T. Ford of Los Angeles, California.

1500. Given by Mrs. Maria T. Wardwell of Plymouth, Connecticut.

THE HENRY HERBERT BROWN SCHOLARSHIP FUND, \$1,000. Given by Mrs. Fannie E. Brown of Los Angeles, California, in memory of her son.

1600. Given by Mary E. Elwood of Redlands, California.

THE MABEL S. BRIDGES MEMORIAL SCHOLARSHIP, \$3,500. Given by Mr. and Mrs. A. S. Bridges of San Diego, California, in memory of their daughter. Available for women.

THE H. G. BILLINGS MEMORIAL SCHOLARSHIP, \$1,000. Given by Mrs. E. A. Billings of Los Angeles, California, in memory of her husband.

THE THOMAS F. HOWARD MEMORIAL SCHOLARSHIP, \$2,000. Given by Dr. and Mrs. H. G. Brainerd of Los Angeles, California, in memory of Mrs. Brainerd's father.

1800. Given by Miss Jean Loomis, '97, of Nanking, China.

1800. Given by Dr. Anna H. Searing of Escondido, California.

THE BRISTOL MEMORIAL FUND, \$400. A fund raised as a memorial to the Reverend Sherlock Bristol.

THE ARTHUR WARREN PHELPS MEMORIAL SCHOLARSHIP, \$2,000. Given by Mrs. C. S. and Mr. C. A. Phelps of Claremont in memory of their son and brother.

THE REMBRANDT CLUB SCHOLARSHIP. The sum of twenty dollars a semester. Available for students in Art.

The College also administers a loan fund, established by George H. DeKay, Jr., in memory of his brother Frelin Campbell DeKay. By means of this fund, it is possible to co-operate in a moderate way, and temporarily, with the

pressing need of students. This fund has been of so important service as to indicate the great need for increase of such resources, which in the hour of special emergency may often save a student to a college career.

SELF-SUPPORT

A committee of the faculty endeavors to find employment for students needing to earn a part of their expenses. Many are thus helping themselves by various forms of labor such as janitor work, waiting on tables at the Commons, general house work, gardening and the like. The most desirable positions are in general secured by upper-classmen who have proven themselves good workers and good students, and those coming to the College for the first time should be content if any work which they can satisfactorily do is secured for them. Students in any case should come prepared to pay all bills for at least one semester. Their record during this semester will be a large factor in deciding what opportunities for self-help will be open to them. Applications for aid in securing employment should be addressed to Acting Dean E. P. Bartlett, the chairman of the Committee on Student Aid and Labor.

BUILDINGS AND EQUIPMENT

The College grounds consist of about one hundred acres, which sixty are included in Blanchard Park, about ten inumni Field, and the remainder in the campus proper.

There are fourteen buildings on the campus, heated from central heating plant.

The Mary L. Sumner Hall, named in memory of the wife of Professor Charles B. Sumner, is a dormitory affording accommodations for seventy women.

Holmes Hall, a memorial of Cyrus W. Holmes, Jr., of Boston, Massachusetts, reconstructed in 1916 in conformity with more modern plans for buildings and campus, is devoted entirely to chapel, recitation rooms, and various offices of administration.

Pearsons Hall of Science, the gift of Dr. D. K. Pearsons, contains the museum, and the laboratories and lecture rooms of the departments of chemistry, botany, physics and geology. In this building, too, is the Business Office.

The museum is equipped especially for the work in biology, botany and zoology. It contains an abundance of good optical material, including about two hundred and fifty thousand zoological specimens and an herbarium of about one hundred thousand sheets of plants. The Seaver-Rivers collection contains fifty thousand specimens of fossil Mollusca collected in the Pliocene of Santa Monica, California. Dr. Rivers, formerly Curator of the Museum of the State University.

The chemical laboratories are equipped with hoods, gas generators, steam baths, and the usual appliances demanded for thoroughly good work. The department is equipped throughout with water, gas and electricity and has individual sinks, and equipment for one hundred and eight students.

The physical laboratories are well equipped with apparatus selected from standard patterns of the best domestic and foreign instrument makers. Each year valuable additions are made to the equipment.

The biological laboratories contain an extensive series of skeletons and models for use in comparative anatomy. In the laboratory work, in general and advanced zoology, there is abundant material, both wet and dry, from all parts of the world. The reference collections for use in general and special entomology are in many respects unexcelled.

The botanical equipment, besides the herbarium, has for use in general mycology a complete bacteriological outfit including sterilizers, incubators, and cultural apparatus.

All of these laboratories possess full batteries of microscopes and microtomes, and are well equipped with all the extensive apparatus and appliances necessary in anatomical, physiological, histological, and embryological work.

The Library, the gift of Mr. Andrew Carnegie, is an imposing structure, exceptionally well adapted to the purpose for which it was built.

The Frank P. Brackett Observatory, the gift of Llewellyn Bixby, '01, is designed throughout to be of service to the student in the direct study of the stars. It stands on an attractive spot upon an elevation in Blanchard Park. The equipment includes an equatorial telescope, with a Clark objective of six inches clear aperture, and a mounting, which includes driving clock and other modern conveniences, made by Wm. Gærtner of Chicago, a three-inch astronomical transit and chronograph, both made by the Gærtner Company, a standard Riefler clock for mean solar time, and an expensive clock for sidereal time; also a horizontal telescope with a six-inch objective, having a focal length of forty

a cœlostat. In connection with this is employed a three-foot spectrograph with a two-inch grating, loaned by Mt. Wilson Solar Observatory.

The Albert K. Smiley Hall is the dormitory for men. It has both single rooms and suites of three rooms, affording accommodations for eighty students.

Rembrandt Hall, the first section of the Art Building, is devoted chiefly to the work of the Department of Art. The upper floor contains studio and work rooms; the lower floor contains a convenient auditorium of moderate size for exhibits and assemblies.

The Mabel S. Bridges Hall of Music, the gift of Mr. and Mrs. Appleton S. Bridges, of San Diego, recently completed, offers opportunities for the study of music unexcelled in Southern California. Besides numerous studio and practice rooms magnificently equipped with Steinway pianos, it contains a large auditorium, a four manual pipe organ and a large practice organ. The building is of reinforced concrete with Spanish tile roof.

The Renwick Gymnasium contains ample equipment for physical training, together with shower bath and locker facilities to make of the highest usefulness the swimming pool which adjoins it.

The Claremont Inn has, besides a large student dining room for the College Commons, accommodations for eighty guests.

The Greek Theater, built to take advantage of the natural setting of Blanchard Park, though uncompleted, has at present a seating capacity of over 4000. Here the great Historical Pageant was given in 1913; here are given the senior plays, various concerts and entertainments; and here are held student rallies about bonfires built in the center space.

The Harwood Hall of Botany, the gift of Mr. A. P. Harwood, of Upland, erected in the summer of 1915, is a commodious building, containing lecture rooms and laboratories for the use of the Department of Botany. Adjoining it is the Agricultural and Botanical Laboratory, consisting of a greenhouse, a lath house and a central classroom.

The Marine Laboratory, located at Laguna Beach, has private rooms for special workers and two general laboratories, as well as storerooms, work rooms and aquarium rooms.

Various other smaller buildings add to the completeness of the College plant.

THE LIBRARY

The College possesses three library collections, the Cook-Baker Biological Library, the Astronomical Library, and the main College Library. The main library is housed in the Carnegie Library Building, the Cook-Baker Library (Zoology section) in Pearsons Hall of Science and (Botany section) in Harwood Hall, and the Astronomical Collection in the F. P. Brackett Observatory. The two departmental libraries exist as independent collections but the intention is ultimately to have them all catalogued in the main library although continuing as separate departmental collections.

The main library is a collection of solid working material. Although not large it has been carefully selected and represents therefore a working library of exceptional value. Certain departments as English Literature, Economics, History, Biography, Biology, Education, Philosophy, and Psychology have moderate endowments and are therefore proportionately better supplied. Other departments have only small amounts out of general funds but are gradually being provided with endowments.

In connection with the main library there is a notable collection, the Mason California Collection, containing some of the most important works bearing on early California history. The Library is also a depository for the publications of the Carnegie Institution of Washington, and for the United States Government documents.

The growth of the Library in the last four years has been particularly rapid. June first 1913 there were 17,873 books in the library; June first, 1917, 35,510 (not including the Astronomical Library), an increase of one hundred per cent in four years.

The majority of the best scholastic journals are to be found on the periodical shelves in the main library. In addition to these a large number of technical journals are received in exchange for the scientific publications of the College and are kept on file in the departmental libraries.

DEPARTMENTAL ORGANIZATIONS AND CLUBS

THE CHORAL UNION is an organization of students and members of the community for drill in choral work. It meets each Thursday evening for practice under the direction of the Department of Music, and twice each year gives a public concert.

THE POMONA COLLEGE Glee Club, the Pomona College Women's Glee Club, the Pomona College Orchestra, and the Pomona College Band are flourishing organizations under the general direction of the Department of Music.

THE REMBRANDT CLUB is an organization of students and members of the community which meets once a month for art study, programs on art subjects, and social intercourse.

THE ASTRONOMICAL SOCIETY aims to help the observer in his work, in building up its library and in the issuing of publications. The associate membership is drawn from alumni and friends of the College, while the active membership includes the students of astronomy together with members of the faculty and resident graduates.

THE ZOOLOGICAL SEMINAR. The aim of the Zoological Seminar is chiefly the review and discussion of recent important researches as published in the zoological journals. Membership is limited to students of the Junior and Senior classes chosen for excellent scholarship and marked interest in the work of the department, who meet every two weeks with the faculty of the Department of Zoology.

THE MATHEMATICAL SOCIETY. The Society of Pure and Applied Mathematics meets every month for presentation and discussion of results of study and investigation in

physical sciences and mathematics. It is open to advanced students who are interested in these subjects and who agree to take an active part in its work.

THE LITERATURE SEMINAR. The purpose of the Literature Seminar is the presentation from a graduate or professional point of view of those masterpieces of literature which have dominated the content and form of other literature. Two sections devoted respectively to foreign language and to English have recently been formed. The meetings are monthly and are open to students and community.

THE HISTORY SEMINAR consists of a student group organized to study special phases of contemporary history.

THE BOTANICAL SEMINAR is composed of those students of Botany who are interested in reviewing current literature and discussing botanical history and other phases of the subject not presented in the regular curriculum.

DER DEUTSCHE VEREIN is composed of those who have studied at least three years of work in German. It meets every two weeks for the reading and discussing of papers in German and for other exercises which tend to cultivate fluency and accuracy in the use of the language.

LE CERCLE FRANCAIS, composed of students making a specialty of the French language, meets fortnightly for practice in French conversation, presentation of papers and discussion of topics relating to the various aspects of French life and literature.

EL CIRCULO ESPANOL, composed of students making a specialty of Spanish, meets fortnightly for practice in Spanish conversation and the presentation of appropriate papers in the language, bearing upon the literature and life of the Spanish world.

STUDENT ACTIVITIES

THE ASSOCIATED STUDENTS. This association harmonizes all student activities. Its officers are chosen by the student body from their own number. All important questions are considered by its executive committee, which is composed of those prominent in such varied lines as athletics, oratory, the editorship of the Student Life. This body has charge of inter-collegiate as well as inter-class relations.

MEN'S ORGANIZATION. The men of the student body form a voluntary organization, electing their own officers and committees and holding regular meetings. This organization controls largely the interclass and social relations of the men.

WOMEN'S ORGANIZATION. The women of the student body form a similar organization for considering and regulating the social relations of the women.

CHRISTIAN ASSOCIATIONS. Branches of the Young Men's Christian Association and the Young Women's Christian Association are well organized and doing effective work. Representation in the inter-collegiate and state conventions and the visits of active workers from outside serve to maintain interest in the work both at home and abroad. Through the co-operation of the associations and the College there have been established, as a part of the curriculum, courses in Bible study adapted to all classes of students and conducted by members of the faculty.

THE POMONA COLLEGE LITERARY SOCIETY, composed of both men and women, meets every two weeks. The work is varied in character, covering all literary lines.

THE POMONA COLLEGE DEBATING CLUB is composed of men. It meets every two weeks for prepared and impromptu debates on the live issues of the day.

THE ALPHA KAPPA is a society for women, giving dramatic debates and familiarity with important current topics.

THE POMONA COLLEGE LYCEUM, composed of men, is also a debating club, and meets bi-weekly.

THE AREOPAGUS is composed of men. The object of the society is to promote efficiency in public speaking, debate, and oratorical drill. Meetings are held every two weeks.

THE DELTA LAMBDA is a debating society for women, meeting bi-weekly.

THE ADELPHI is a debating society for men which meets weekly.

THE MASQUERS is an organization of students, whose purpose is the study and presentation of plays and the general promotion of the dramatic enterprises of the undergraduate body.

ATHLETICS. The immediate management of all contests and games rests with the Associated Students, though all engagements are under the supervision of a committee of faculty and a student manager.

Alumni Field, consisting of about ten acres, has been developed by the alumni into athletic grounds unsurpassed in Southwest in equipment and beauty of setting. First-class tennis courts, an excellent track, baseball and football fields, also hockey and basket ball courts are within the limits of the campus, and athletic exercises and field sports are encouraged by the officers of the institution.

A swimming pool, of the standard size for water polo, and fully equipped with modern appliances, is open to all students. An invariable condition to the use of the pool is a yearly annual medical examination.

Students are required to maintain a certain standard of scholarship in all their studies in order to represent the College in any of its athletic teams or other organizations coming before the public.

PUBLICATIONS

The stated publications of the College are issued as numbers of the *Pomona College Bulletin*, which is published monthly. These include:

The Annual Directory of Faculty and Students.

The Annual Catalog.

The Annual Register of Alumni.

The Annual Register of Faculty and Students.

The Annual Announcement of Courses.

Alumni and departmental publications are:

The Pomona College Quarterly Magazine, devoted to interests of the College and Alumni.

The Journal of Entomology and Zoology, published under the auspices of the Department of Zoology.

The Publication of the Astronomical Society of Pomona College, published under the auspices of the Department of Astronomy.

STUDENT PUBLICATIONS

The *Student Life* is published semi-weekly by the student body and is devoted to current affairs.

The *Metate* is published each year by the Junior class, contains material appropriate to a college annual.

The *Association Hand Book*, which contains material of value, especially to new students, is issued at the beginning of the year by the Christian Associations.

BUREAU OF APPOINTMENTS

A Bureau of Appointments is conducted in connection with the office of the Secretary of the Faculty for the benefit of members of the College who desire to teach after graduation. The purpose of the Bureau is to maintain a list of available positions and to recommend from the applicants registered persons who are qualified for specific positions.

An opportunity is also offered graduates of the College who are already engaged in teaching, to register their present positions and to indicate whether they desire a change and, if so, under what conditions. An effort is made to further the desires of graduates so far as made known. The services of the Bureau are entirely gratuitous. Communications should be addressed to Professor M. E. Churchill, Secretary of the Faculty.

THE ASSOCIATION OF COLLEGIATE ALUMNAE

The Association of Collegiate Alumnae organized in 1899 by prominent college women for the "maintenance of high standards of education," and including at the present time twenty-five leading universities and colleges, received Pomona College to membership in July 1915. By this action women graduates of Pomona College are eligible for membership in one of the local branches of the Association, and for any who are not within reach of such branches there is a provision for a general membership. The general membership fee of one dollar may be sent to Mrs. Katharine P. Pomeroy, 938 Wrigley Place, Chicago, Ill., and entitles one to all membership privileges, including the Quarterly Journal.

SUMMARY OF STUDENTS

NOVEMBER, 1917

Graduate Students.....	
Seniors	
Juniors	
Sophomores	
Freshmen	
Special Music and Art Students.....	
Special Students.....	
Unclassified	

Total Enrollment.....

SUMMER SESSION

Laguna Marine Laboratory.....	
Claremont	

Total

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ANNUAL CATALOG

1918—1919



CLAREMONT
CALIFORNIA

POMONA COLLEGE BULLETIN

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Vol. XV

NOVEMBER, 1918

Thirty-first Year

Pomona College

ANNUAL CATALOG

Register of officers and teachers for the year
1918-1919; requirements for admission,
description of courses and general
information

November 1918
CLAREMONT, CALIFORNIA
Published by the College

1918	1919		1920
JULY	JANUARY	JULY	JANUARY
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COLLEGE CALENDAR

1918

September 30, Monday	{	Registration Days. Monday and Tuesday, examinations for entrance
October 1, Tuesday		
October 2, Wednesday		
October 14, Monday		Founders Day
October 28, Thursday		Thanksgiving Recess
November 21, Saturday		Christmas Recess begins, 4:15 p. m.

1919

January 2, Thursday		Christmas Recess ends, 10:30 a. m.
January 8, Saturday		Registration Day for Second Semester
January 10, Monday		Second Semester begins, 10:30 a. m.
January 17, Monday		Kinney Freshman Contest in Declamation, 8 p. m.
January 20, Thursday		Matriculation Day
January 22, Saturday		Washington's Birthday
March 22, Saturday		Spring Recess begins, 12:00 m.
March 31, Monday		Spring Recess ends, 10:30 a. m.
April 30, Friday		Memorial Day
April 16, Monday	{	Final Examinations
to		
April 21, Saturday		
April 23, Monday		Commencement

SUMMER VACATION

September 22, Monday	{	Registration Days. Monday and Tuesday, examinations for entrance
September 23, Tuesday		
September 24, Wednesday		
September 24, Wednesday		First Chapel Service, 10:30 a.m.

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HISTORICAL SKETCH

the history of the development of Southern California from a land sparsely inhabited and apparently fit only for the cattle range, into a genuine American commonwealth with a multitude of prosperous communities, covers hardly forty years; but this brief span of time has been a period of intense activity and remarkable growth. This epoch of swift progress was inaugurated by the completion of a second transcontinental railway, in this case piercing Southern California directly from the East, together with the sudden opening to a realization of the great agricultural possibilities of the section through irrigation. A large immigration and a rapid increase in land values were at once induced. New towns sprang up almost in a day and great industrial enterprises characteristic of such a period were at once inaugurated.

While the commercial and speculative interests were conspicuously in evidence there were among the new settlers, nevertheless, many whose chief concern was for the higher qualities of life and character. Not least among these were those whose former affiliations had been with New England institutions. The Southern California District Association of Congregational Churches, meeting at San Bernardino in 1882, agitated the question of founding a college of New England type. In 1886 the Association met at Redlands (now Redlands), when the report of the educational committee was an earnest appeal for such a college. At this meeting a larger educational committee than usual was appointed and was instructed to view locations and to make proposals of aid toward establishing a "Christian College of the New England Type." In accordance with these instructions the committee visited various places from which

they had received offers of aid and gave the matter serious and careful consideration.

In May, 1887, the District Association met in Los Angeles and became the General Association of Southern California. This General Association immediately gave full power to its committee of education, not only to select the College site, but to appoint trustees for the prospective institution. Fifteen trustees, two of whom are still members of the board, were duly appointed; the College was incorporated October 14, 1887, under the name of The Pomona College and a site was selected about four miles north of the city of Pomona.

For the immediate needs of the College a small private house was rented in Pomona, and in it the work of instruction was begun in September, 1888. In the following January an unfinished hotel in Claremont (now Sumner Hotel) together with considerable land adjacent, was given to the College and the work was transferred to that place. It was originally supposed that this location would be temporary; the name of the College was therefore retained in the expectation that ultimately the site originally selected would be used. Later this plan was abandoned and Claremont made the permanent seat of the College. By this time, however, the name of "Pomona College" had become so definitely fixed that it has been retained, notwithstanding the change of location.

The growth of the College has been swift and constant. The first class was graduated in 1894, at which time the total number of college students was forty-seven. For some time the work of the Preparatory School was of large importance, but later on this was discontinued owing to the increased growth and importance of the College. In 1915 the College had become so large as to compel, at least a temporary 1

n in the number of its students, the maximum of the
hman Class being placed at two hundred, one hundred
and one hundred women. The original campus of about
ve acres has been enlarged by purchase and by gifts
it now comprises one hundred acres; and this area,
her with its buildings, is being developed according to
s carefully worked out by competent landscape gar-
rs and architects, the whole growth being in accord with
harmonious plan. All this rapid progress of the insti-
n has been made possible by a most generous company
iends who have responded nobly to the calls of higher
stian education and to the needs of young people. From
ery beginning the institution has been the creation of
fice, affection and idealism. To a remarkable degree
College has been made possible by a great democracy of
minded givers, and the character of these benefactors
lected in the daily life and procedure of the College.

hile the College was originally Congregational in organi-
n, it long ago made itself the servant of a wider fellow-

The Board of Trustees is a self-perpetuating body,
utely free from ecclesiastical control and representing
ent communions, but obliged, nevertheless, by the Col-
Charter to maintain the institution as truly Christian,
gh unsectarian. From the first it has been the policy
l concerned in the administration of the institution to
tain a high standard of college life and work, and to
ne emphasis upon quality in the development of strong
erviceable Christian manhood and womanhood. Thus
urpose for which the College was founded is expressed
motto, "Our Tribute to Christian Civilization."

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JAMES A. BLAISDELL

JAMES P. JAMIESON

ROBERT H. ORR

} *Architects*

*In conjunction with a committee of the Faculty.

FACULTY

JAMES ARNOLD BLAISDELL

345 College A

*President, 1910**

B.A., Beloit College; M.A., Beloit College; D.D., Beloit College. Graduate Student, Hartford Theological Seminary.

CYRUS GRANDISON BALDWIN

Palo A

President Emeritus, 1890

B.A., Oberlin College; M.A., Oberlin College; Student, Andover Theological Seminary; D.D., Oberlin College.

EDWIN CLARENCE NORTON

137 W. Seventh

Dean of the Faculty and Professor of the Greek Language and Literature on the Edwin Clarence Norton Foundation, 1888

B.A., Amherst College; M.A., Amherst College and Yale University; Ph.D., Carleton College; D.D., Pacific Theological Seminary. Graduate Student, Johns Hopkins, Columbia and Oxford Universities.

FRANK PARKHURST BRACKETT

270 E. Third

Professor of Mathematics on the Frank Parkhurst Brackett Foundation and Director of the Observatory, 1888

B.A., Dartmouth College; M.A., Dartmouth College. Honorary Fellow, Clark University.

PHEBE ESTELLE SPALDING

261 W. Fifth

Professor of English Literature on the Phebe Estelle Spalding Foundation, 1889

B.L., Carleton College; M.L., Carleton College; Ph.D., Boston University.

DANIEL HERBERT COLCORD

157 E. Seventh

Professor of the Latin Language and Literature, 1890

B.A., Amherst College; M.A., Amherst College; B.D., Andover Theological Seminary. Graduate Student, Harvard University.

ARTHUR DART BISSELL

319 Harvard A

Professor of German, 1892

B.A., Amherst College; M.A., Amherst College; B.D., Yale University. Graduate Student, Yale University and University of Leipzig.

GEORGE GALE HITCHCOCK

721 College A

Professor of Physics, 1892

B.A., University of Nebraska. Graduate Student, Johns Hopkins and Cornell Universities.

*The date in each case denotes the beginning of original term of service.

- GE STEDMAN SUMNER 105 College Ave.
*Professor of Economics and Sociology on the Stedman-
 Sumner Foundation, 1897*
 B.A., Pomona College; B.A., Yale University; Ph.D., Yale University.
- CHARLES CUMMINGS STEARNS 146 E. Tenth St.
*Professor of Biblical History and Literature on the
 Nancy M. Lyon Foundation, 1906*
 B.A., Yale University; M.A., Yale University; B.D., Union Theological
 Seminary. Graduate Student, University of Berlin.
- ELLA BERRY Sumner Hall
Dean of Women and Assistant Professor of Mathematics, 1909
 B.S., Mount Holyoke College; M.A., Mount Holyoke College.
- ALFRED ALEXANDER LYMAN 833 Indian Hill Blvd.
Professor of Chemistry, 1909
 B.A., Beloit College; M.A., Beloit College; Ph.D., Johns Hopkins Uni-
 versity. Graduate Student, University of Chicago.
- ERASTUS CHURCHILL 507 Yale Ave.
*Secretary of the Faculty and Associate Professor of
 German, 1902*
 B.A., Knox College; MA., Knox College; Litt.D., Knox College; B.D.,
 Yale University. Graduate Student, University of Leipzig.
- DALGAR GARBUTT FRAMPTON 927 Harvard Ave.
Professor of the English Language, 1904
 B.A., Illinois College; M.A., Illinois College; M.A., Harvard University.
 Graduate Student, Harvard and Chicago Universities.
- CHARLES GRACCHUS NEELY 739 College Ave.
Professor of Constitutional History and Law, 1911
 B.L., University of Illinois.
- WILLIAM ATWOOD HILTON 1264 Dartmouth Ave.
*Professor of Zoology on the Willard George Halstead
 Foundation, 1905*
 B.S., Cornell University; Ph.D., Cornell University.
- ALFRED ALLEN PARKER¹ 545 Indian Hill Blvd.
Professor of Philosophy, 1912
 B.A., Kansas State Normal School; M.A., Harvard University; Ph.D.,
 Harvard University.
- HAROLD CAPEN EWER 339 Yale Ave.
Professor of Psychology, 1916
 B.A., Brown University; M.A., Brown University; Ph.D., Harvard Uni-
 versity.
- ¹Absent on leave, 1918-1919.

RALPH HAINE LYMAN

357 W. Tent

*Professor of Applied Music and Instructor in Singing,
Head of Department of Music, 1917*

B.A., Grinnell College. Student in voice with Karleton Hackett, W. B. Olds, Grant Hadley, Arthur Middleton, Courtland Cooper, H. Cowper and other American masters, and with Vittorino Moratti in B.

WILLIAM FORBES COOLEY

730 Harvard

Exchange Professor of Philosophy, 1918

B.S., New York University; M.S., New York University; B.D., Theological Seminary; Ph.D., Columbia University.

WILLIAM POLK RUSSELL

506 E. Sixth

Associate Professor of Mathematics on the Joseph W. Fisher Foundation, 1904

B.A., Cumberland University; M.A., Cumberland University. Graduate Student, Columbia and Yale Universities.

MARO BEATH JONES

428 Yale

Associate Professor of Romance Languages, 1911

B.A., Boston University; M.A., Boston University; Graduate Student, Universities of Chicago, Geneva and Barcelona. Student, *Estudis Universitaris Catalans*, Barcelona.

ARTHUR VOLNEY STOUGHTON

146 W. Seventh

*Associate Professor of Physiology and Hygiene, and
College Physician, 1911*

B.A., Pomona College; M.D., Ohio Medical University. Graduate Student, Medical Department of Johns Hopkins University and Medical School, Harvard University. Student, Laboratories of Friedrichshain Krankenhaus and Private Laboratory of Professor Pick, Berlin. Resident physician, Protestant Hospital, Columbus, O.

WALDEMAR CHRISTIAN WESTERGAARD

135 E. Ninth

Associate Professor of History on the Warren F. Day Foundation, 1916

B.A., University of North Dakota; M.L., University of California; University of California. Fellow in History, Cornell University.

HANNAH TEMPEST JENKINS

Claremont

Assistant Professor of Art and Design, 1905

Graduate Teachers College, Columbia University. Student Philadelphia Academy of Fine Arts. Pupil of Jean Paul Laurens, Constant and Pierre in figure and portrait, of Henry Thompson in landscape, and Wm. M. Chase, Robert Vonnoh and Cecilia Beaux in portrait. Salonist, 1889.

ROBERT TRESILIAN BELCHER

169 W. Sixth

Assistant Professor of Mathematics and Engineering, 1907

B.A., Queen's University. Graduate Student, Queen's College and University of California.

FACULTY

17

TER ALFRED ALLEN 131 E. Tenth St.
*Assistant Professor of Musical Theory and Appreciation,
 and Instructor in Organ, 1912*

A., Beloit College; B.Mus., Yale University; Associate, American Guild
 of Organists.

A CHARLTON SQUIRE¹ 248 W. Seventh St.
Assistant Professor of Physical Education for Women, 1910
 A., Pomona College. Graduate Student, University of California and
 Wellesley College.

ARD PAYSON BARTLETT¹
Assistant Professor of Chemistry, 1909
 A., Dartmouth College; M.A., Harvard University; Ph.D., Harvard
 University; Graduate Student, Columbia University.

AM SHEFFIELD AMENT 1130 Harvard Ave.
Assistant Professor of English, 1912
 A., Oberlin College; M.A., Harvard University. Graduate Student,
 Columbia University.

OR EDWARD MARRIOTT 116 Twelfth St.
Librarian, 1912
 A., Beloit College; M.A., University of California. Graduate Student,
 Yale University.

G OTIS PECKER¹
Assistant Professor of Romance Languages, 1912
 A., Boston University. Graduate Student, Boston University.

AM HOLLAND MATLOCK¹ 246 E. Second St.
Assistant Professor of German, 1913
 h.B., Drake University. Graduate Student, Goettingen, Heidelberg and
 Munich, the Sorbonne and College of France.

ER ELMER ROBBINS Harrison and Berkeley Aves.
Assistant Professor of Ancient Languages, 1915
 A., University of Michigan; M.A., University of Michigan; Ph.D., Uni-
 versity of Michigan. Graduate Student and holder of University and Buhl
 Classical Fellowships, University of Michigan.

ER EARLE HARTLEY 248 W. Tenth St.
Assistant Professor of Organ and Piano, 1915
 A., Yale University; B.Mus., Yale University. Associate, American
 Guild of Organists. Pupil of Widor, in Organ and Composition, and of
 Hubbs.

absent on leave in war service.

CARL PETER SCHOTT

325 W. Sixth

Assistant Professor of Physical Education for Men, 1916

B.E., Nebraska State Normal School; B.P.E., Young Men's Christian Association College, Springfield, Massachusetts. Graduate Student, Pomona University.

PHILIP ALEXANDER MUNZ¹

Smiley

Assistant Professor of Botany, 1917

B.A., University of Denver; M.A., University of Denver; Ph.D., Columbia University.

AMANDUS ZOELLNER

346 Yale

Assistant Professor of Violin, 1918

GEORGE SAMUEL BURGESS

Claremont

Assistant Professor of Political Economy, 1918

B.A., University of Michigan; J.D., University of Michigan.

FRANK DAVID THOMSON

338 Harvard

Assistant Professor of Accounting and Commercial Subjects,

B.A., Knox College; M.A., Knox College; Graduate Student, Johns Hopkins University.

REGINALD POLE

Los Angeles

Director of Dramatics, 1916

B.A., Cambridge University.

MABLE CLAIR WEST

1016 Columbia

Instructor in Piano, 1905

B.S., Pomona College. Graduate Student, Peabody Conservatory of Music, Baltimore.

HARRIET PASMORE

132 E. Second

Instructor in Singing, 1914

B.A., University of California. Graduate Student, University of California.

ALFRED OSWALD WOODFORD

639 Yale

Instructor in Chemistry and Geology, 1915

B.A., Pomona College. Graduate Student, University of California.

MARCIA CLARICE SPEAR

246 E. Second

Instructor in Physical Education for Women, 1917

B.A., Pomona College. Graduate Student, University of California.

HELEN FELICITAS HAURY

272 W. Seventh

Instructor in Chemistry, 1918

B.A., Pomona College. Graduate Student, Columbia University and University of California.

¹Absent till Jan. 1, 1919, in war service.

FACULTY

19

EVIEVE NEWMAN VREDENBURGH 352 W. Fourth St.
Instructor in Romance Languages, 1918
 B.A., Pomona College. Graduate Student, Leland Stanford Junior University.

ME GAZZO Claremont Inn
Instructor in Romance Languages, 1918

JORIE DAYTON HITCHCOCK 231 W. Sixth St.
Instructor in English, 1918
 B.A., Pomona College.

ENCE DODGE RUSSELL 517 Indian Hill Blvd.
Assistant in Piano, 1918
 B.A., Pomona College. Graduate Student, Pomona College.

FRED MCPHERSON GOODRICH 407 Harvard Ave.
Assistant in Physical Education for Women, 1918
 B.A., Pomona College.

CO-OPERATING FACULTY, 1918-1919

OLD EUGENE BILLINGS Alhambra
Chemistry
 B.A., Pomona College; M.S., Pomona College.

LES DAVIDSON 707 College Ave.
English
 B.A., Iowa College; M.A., Iowa College; Ph.D., Yale University. Graduate Student, University of California.

Y B. GOODDELL 1278 Yale Ave.
Botany
 B.S., Occidental College; M.S., Princeton University.

GE CARTER GRISWOLD Mesa Ave.
English
 B.S., Cornell University; Ph.D., University of Halle.

ELL A. HOLDEN 320 Harvard Ave.
Pharmacy

H PATTEN Pomona Valley Hospital
Elementary Nursing
 B.N., Winnipeg General Hospital, Winnipeg, Canada.

HENRY K. WINGATE

1166 Columbia

Mathematics

B.S., Carleton College; M.L., Carleton College.

D. F. DUNSTER, *General Secretary, Y. M. C. A.*

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Claremont

*Commanding Officer*Graduate, United States Military Academy, West Point. Major U.S.A.
Retired.

EUGENE WHITE NIXON

219 W. Sixth

*Personnel Adjutant*B.A., Monmouth College. Graduate Student, University of Illinois.
and Lieutenant, Infantry, U.S.A.

THOMAS DAVIS

Bar

Commanding Company A.

B.A., University of Southern California. Second Lieutenant, Infantry, U.S.A.

FREDERICK J. MORAN

Bar

Commanding Company B.

Second Lieutenant, Infantry, U.S.A.

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Room 3, Holmes

GRACE ELLA BERRY, M.A., *Dean of Women*

Summer

MILTON ERASTUS CHURCHILL LITT.D., *Secretary of Faculty*

Room 53, Li

FRANK PARKHURST BRACKETT, M.A., *Director of the Observatory*

The Observ

MENDAL GARBUTT FRAMPON, M.A., *Acting Registrar*

Rooms 7 and 8, Holmes

EDWARD MARRIOTT, M.A., *Librarian*

Library

ELMER ROBBINS, PH.D., *Chairman of Committee on Admission*
Room 10, Holmes Hall

JEANETTE EWING, B.A., B.S., *Assistant Librarian*

Library

E MARIE FOX, *Assistant Registrar and Assistant*
Secretary of the Faculty

Room 6, Holmes Hall

JAMES BERNARD, B.A., *Assistant to the President*

President's Rooms, Library

A DEARBORN, B.A., *Secretary to the Administration*

President's Rooms, Library

BELL, *Secretary to the Administration*

President's Rooms, Library

OTHER OFFICERS

EVERETT JONES, B.S., *Business Manager*

136 E. Ninth St.

LOUISE BILLINGS, *Accountant*

541 Harvard Ave.

LOUISE JEWELL, *Matron of Sumner Hall*

Sumner Hall

N HIGBEE, *Assistant to the Business Manager*

319 W. Sixth St.

NEELY PRATT, B.A., *Assistant in the Library*

739 College Ave.

TEN EYCK, *Assistant to the Chairman of Committee*
Admission

Pomona

GLENN HUTCHISON, *Superintendent of Grounds*

Fifth St. and Cucamonga Ave., Ontario

AURITZ CARLSON, *Superintendent of Buildings*

922 Columbia Ave.

COMMITTEES OF THE FACULTY

WITH PLACE AND TIME OF MEETING

BUILDINGS AND GROUNDS—(In conjunction with a committee of Board of Trustees)—Messrs. Stearns, Hitchcock, Belcher. 51, Library. On call.

ADMISSION—Messrs. Robbins, Frampton, Miss Berry. Room 9. On call.

CLASSIFICATION—Messrs. Frampton, Brackett, Sumner, Miss Messrs. Lyman, Robbins. Room 7. 10:30 a. m., Thursday.

COLLEGE LIFE—Messrs. Norton, Brackett, Sumner, Miss Messrs. Churchill, Ewer, R. H. Lyman, Robbins, Nixon, Pasmore, Spear. Room 9, 1:30 p. m., Thursday.

COURSES OF STUDY—Messrs. Sumner, Frampton, Hilton, Westergaard. Room 14. 10:30 a. m., Tuesday.

EDUCATIONAL EFFICIENCY—Messrs. Brackett, Hitchcock, J. Lyman, Frampton, Neely, Cooley, Marriott, Ament. Room 51. Thursday.

FACULTY MEETINGS—Miss Berry, Messrs. Bissell, Marriott, ner Hall. 8:30 p. m., Monday.

FEDERATED CLUBS—Messrs. Jones, Brackett, Bissell, Hilton. call.

GRADUATE WORK—Messrs. J. A. Lyman, Bissell, Hitchcock, Room 30. On call.

LIBRARY—Miss Spalding, Messrs. Marriott, Stoughton, gaard, Burgess, Miss Ewing. Library office. On call.

PHYSICAL EDUCATION—Messrs. Russell, Stoughton, Schott, Miss Spear. Room 2. 10:30 a. m., Tuesday.

PUBLICATIONS—Messrs. Churchill, Hilton, Ament. Room call.

PUBLIC EVENTS AND LECTURES—Messrs. Churchill, R. H. Allen, Schott, with Business Manager Jones. Room 53. On

RELIGIOUS INTERESTS—Messrs. Marriott, Stearns, Robbins, Ewing, Mr. Bernard. Library office. On call.

ROOMS—Messrs. Sumner, Churchill, Nixon. Room 14.

RULES—Mr. Nixon, Miss Berry, Messrs. Churchill, Fr Room 9. On call.

STUDENT AID AND LABOR—Messrs. Robbins, Marriott, Miss Room 9. On call.

SUMMER SCHOOL—Messrs. Bissell, Hilton, Russell. On call.

CHARACTER OF THE COLLEGE

ona College is located at Claremont, on the Santa Pacific Electric Railways, thirty-five miles from Los Angeles. It is connected by the Pacific Electric Railway with Pomona, which is four miles distant, on the Salt Lake and Southern Pacific roads. On the rim of an orchard-valley, which is hemmed in on all sides by lofty mountains, and with Mt. San Antonio in the immediate background rising to the height of ten thousand feet, its location is one of rare beauty. The genial southern climate is favorable to outdoor life and exercise the year around, while the deep canyons, the rushing streams and the long trails in the heart of the hills allure to the rewarding intimacies of the country. The town of Claremont, which now numbers eighteen hundred inhabitants, owes its existence to the college, and has the attractive features of the typical college community. The location and situation, within easy reach of the great and growing metropolis of the Southland and yet in the quiet retirement of valley and hill, is very wholesome and stimulating in full measure to the body and mind. Industry and thoughtfulness and all the best enthusiasms of college life are capable.

The college is pre-eminently a company of workers. From its beginning it has maintained a reputation for thorough scholarship rather than in large numbers. The procedures of the College are established in the purpose of selecting students who appreciate the seriousness of college opportunity. To this end, the standards of admission are unusually high. Not only is the number limited as defined elsewhere, only students who have completed their preparation with a high grade of promise are admitted. It is the distinct purpose to make the membership in the institution itself a scholastic honor. This inevitably

involves a sacrifice of certain values which would be temporarily pleasurable but which are not consistent with the most remunerative purposes.

It is the habit of the College to urge that schools should not only be high but also broad and inclusive. Pomona College is not a professional school. It insists that the best preparation for life includes not only the generous and complete training of the college course as is here given, but also at a later period a thorough definite professional specialization. It has farther insisted that this best and most complete training was practically given to a much larger number of young people than common to other schools that they have the resources of time and money for it. The College is eager to co-operate in the problems of such young students; it has also been singularly successful in meeting its body of students with these ambitions, and the remarkable success of its graduates is due in no small measure to the fact that nearly seventy per cent of all who have graduated have taken subsequent professional training.

To the end that the College may be adequate for the broadest intellectual citizenship and service, a certain number of courses representing typically the differentiated fields of knowledge and investigation are required, and particular emphasis is laid upon those topics which relate to the history of thought, the organization of society and the bases of conduct and righteousness. These courses are required of all, whether staying a longer or a shorter time in the institution, and are important to the main purpose for which the College exists. While these few courses are required, there is around them an ample field for selection, according to the student's individual interest and purpose.

The College recognizes the fact that social training is an essential part of education. It is believed that the

tional character of the College greatly increases the culture of the student body in this respect. Working together on the highest levels of life, men and women are most likely to associate in mutual respect and dignity. It is practically the unanimous testimony of the graduates of this college that these relations add to the genuine wholesomeness and rounded worth of the student's life. While emphasizing social values and opportunities, the College, however, recognizes them as interests which must be held subordinate to the main business of study and work. For this reason limitations which sometimes may seem narrow are laid upon the social life of the college community. Fraternities and sororities, in the ordinary acceptance of these terms, and extravagant social life, do not exist at Pomona College, and no one could seek the institution who is not willing to make surrender of some personal pleasures in the interests of the common college earnestness and simplicity.

Once more; the College is frankly Christian. It owes its origin and support to men and women of Christian ideals; it cannot, therefore, be other than loyal to these interests. Instead of maintaining a separate Christian life, the College so urgently lays upon its students the obligation of allegiance to that wider democracy of service and uplift which is represented in the Christian Church. The College is, nevertheless, emphatically broad in its hospitality to modern thought. It holds that no student should go out of the College unaware of the throbbing questions of the day or unprepared to face the winds of free discussion; therefore, it welcomes all honest expression of opinion, putting faith in the power of truth to hold its own in the arena of open debate. It thus seeks to resource the coming generation with a leadership of intellectual capacity, directed will and Christian character.

DEGREES

BACHELOR OF ARTS

The courses of study offered by the College lead to the degree of Bachelor of Arts. These courses include certain required studies, but also a wide range of electives in language and literature, philosophy, economics, history, mathematics, science and fine arts. An average of fifteen hours of academic work per semester throughout the four years is required for the completion of the courses. A detailed statement of the curriculum will be found on page 37.

COURSES WITHOUT DEGREES

Mature students, ordinarily only such as are at least twenty-one years of age, may be admitted as special students to courses for which by ability and preparation they may be fitted. Special students are not candidates for a degree, though completion of the prescribed courses in Music or Art entitles the student to receive the special State Teacher's Certificate upon the recommendation of the College.

MASTER OF ARTS

In a few departments, where the facilities of the College warrant, limited numbers of students, whose undergraduate records show marked excellence, are accepted as candidates for the Master's degree. Only those are admitted who give promise of contributing a definite and inspiring influence to the life of the College. Such residence is, therefore, required, as is deemed necessary to insure mutually helpful relations. A further statement of requirements will be found on page 41.

ADMISSION

GENERAL REQUIREMENTS AND METHODS OF ADMISSION

It is the purpose of Pomona College to do a distinctly and ably high grade of work, thus preparing its graduates for special distinction in whatever later callings they may choose. To this end candidates for admission to any class must present satisfactory evidence of their fitness for college, both in character and in scholarship. Testimonials of character and a letter of honorable dismissal from the last institution attended are required. As all applications for admission are carefully scrutinized, delay in filing applications inevitably involves delay in acceptance.

The College welcomes tentative applications from prospective freshmen several years in advance and is glad to offer suggestions from time to time regarding the best preparation for admission. In this respect the good offices of the College are freely at the service of all interested inquirers. A medical examination conducted by an authorized physician, under the direction of the Department of Physical Education, is required of all students.

ADMISSION TO FRESHMAN STANDING

Applicants are admitted to freshman standing in any one of three ways, as follows:

First: Examination by the College.

Second: Certificate of the College Entrance Examination Board.

Examinations are given by the College Entrance Examination Board at certain times and places, which may be learned from the Registrar or from principals of secondary schools.

Third: Certificate from approved schools or colleges

Students from approved schools or colleges are admitted without examination on presentation of a certificate signed by the principal or proper official and showing in detail requisite completed courses. Certificate blanks obtained from the Chairman of the Committee on Admission, should be filled out and returned as early as possible after the completion of the high school year.

As the number of students admitted to the freshman class is limited, early application is advised. Applications are listed in the order of their receipt, are considered individually, and in every case must be accompanied by a certificate both as to scholarship and character. No application is considered which does not show fifteen units in accepted subjects, at least twelve of which are recommended.* Special endorsement by the principal must accompany all papers showing non-commended units, such endorsement to include the specific recommendation of the candidate, both as to character and ability, for the undertaking of college work.

Those are matriculated to full standing who at the end of the first semester's residence meet the requirements stated on page 123; those who do not meet the requirements are not allowed to matriculate and are enrolled as in partial standing. No student in partial standing is recommended for college standing in another institution. The final acceptance of entrance units is based upon the character of the work done in class at Pomona College as well as upon the grade of the units presented.

ADMISSION TO ADVANCED STANDING

Students who have sufficient credit from other institutions are admitted to advanced standing on credentials signed

*A minimum of ten units was accepted in 1918-1919 because of the war

proper officials and giving full specifications concerning nature of the courses taken and the time spent in each, together with their rank in each subject. They are assigned credits and credits on the basis of their credentials, but such assignment is provisional until ratified by the Classification Committee. This ratification is not given until after the second semester's residence, at which time the Committee has power to act in adjusting hours or credits, or both, to the specifications shown.

ADMISSION AS SPECIAL STUDENTS

Transfer students, ordinarily only such as are at least twenty-one years of age, may be admitted as special students for courses for which, by ability and preparation, they may be qualified. This provision applies particularly to those equipped for advanced studies in special departments. The privilege of classification as special students is not open to those who seek admission to College in this way as a means of avoiding compliance with the entrance or collegiate requirements laid down for regular students. Special students are not candidates for a degree.

CREDITS FOR NON-COMMENDED WORK

Students who enter with some of their work non-commended may remove their deficiency in one of three ways—re-examination, by continuing the same line of study in College with high grade or by extra work in College not counted toward a degree. These three methods are more fully described as follows:

First: Students may be examined upon any of the subjects presented for entrance, and upon passing B grade receive credit toward entrance for that subject.

Students wishing to remove deficiencies by examination must do so before entering upon College work. Such examinations must be taken during the first three days of registration week of either semester or (by special arrangement) week preceding the College commencement. They must be arranged for in advance through the Registrar.

Second: Entrance credit will be given for non-recommended work after a student has completed with high grade two or more College courses in the same or a closely related subject, or upon conditions laid down in individual cases by the Classification Committee.

Third: Entrance credit may be gained by work in certain College courses, but such courses cannot count toward the number of hours or credits required for graduation, nor toward honors. Moreover, students may not substitute for subjects specifically required for entrance other subjects taken in any other way.

Students are not candidates for a degree nor are they eligible for recommendation to college standing in another institution until they have been matriculated. (See page 12.) Students are matriculated only after they have come into Junior standing. All students must be matriculated before attempting to Junior standing.

COURSES REQUIRED FOR ADMISSION TO FRESHMAN STANDING

In the following outline of courses a "unit" represents a course of study in one subject of high school grade involving five forty-five minute recitations per week or an equivalent for a school year. Laboratory periods should be at least twice the length of recitation periods.

not less than one unit in any subject is normally accepted, though a half unit may be accepted when accompanied by for courses in allied subjects.

SPECIFIC REQUIREMENTS—8 UNITS

English, 2 units	Algebra, 1 unit
History, 1 unit	Geometry, 1 unit
Foreign language, 1 unit	*One third or fourth year laboratory science, 1 unit.

ADDITIONAL REQUIREMENTS—4 UNITS

Selected from the following:

Mathematics
*Laboratory Science
Foreign Language

ELECTIVE—3 UNITS

It is recommended that these electives be chosen from the subjects specified above, but in view of the importance of other lines of high school work credit is allowed for full units in other courses needed for high school graduation, the acceptance of which is specifically recommended by the principal of the school.

DESCRIPTION OF SUBJECTS

The College recommends that the work offered to meet the requirements above shall cover the ground indicated in the following description of courses. Each course constitutes one unit unless otherwise designated.

ENGLISH

Elementary composition and literature. (2 units.)
Intermediate.
Advanced.

Heads of departments in which students wish to continue laboratory work begun in high school may, at their option, require the high school notebook to be submitted as evidence of ability to continue with more advanced work in the department.

The following list* is made the basis of examination indicates books selected for careful reading; B those requiring close study.

A. READING.—From each of the following groups at two selections are to be made, except as otherwise provided under Group I.

GROUP I. CLASSICS IN TRANSLATION.—The Old Testament, comprising at least the chief narrative episodes in Genesis, Exodus, Joshua, Judges, Samuel, Kings, and Daniel, together with the books of Ruth and Esther; the Odyssey, with the omission, if desired, of Books I-V and XV-XVII; the Iliad, with the omission, if desired, of Books XI, XIII-XV, XVII, and XXI; the Aeneid. The Aeneid, the Odyssey and the Iliad should be read in English translation of recognized literary excellence.

For any selection from this group a selection from any other group may be substituted.

GROUP II. SHAKESPEARE.—*Midsummer Night's Dream*; *Merry Wives of Windsor*; *As You Like It*; *Twelfth Night*; *The Tempest*; *Romeo and Juliet*; *King John*; *Richard II*; *Richard III*; *Henry V*; *Coriolanus*, and the following (if not chosen for study under B), *Julius Caesar*; *Macbeth*; *Hamlet*.

GROUP III. PROSE FICTION.—Malory's *Morte d'Arthur* (about 100 pages); Bunyan's *Pilgrim's Progress*, Part I; Swift's *Gulliver's Travels* (voyages to Lilliput and to Brobdingnag); Defoe's *Robinson Crusoe*, Part I; Goldsmith's *Vicar of Wakefield*; Frances Burney's *Evelina*; Scott's Novels, any one; Jane Austen's Novels, any one; Maria Edgeworth's *Castle Rackrent*, or *The Absentee*; Dickens's Novels, any one; Thackeray's Novels, any one; George Eliot's Novels, any one; Mrs. Gaskell's *Cranford*; Kingsley's *Westward Ho!* or *Hereward, the Wake*; Reade's *The Cloister and the Hearth*; Blackmore's *Lorna Doone*; Hughes' *Tom Brown's School Days*; Stevenson's *Treasure Island*, or *Kidnapped*, or *Master of Ballantrae*; Cooper's Novels, any one; Poe's *Selected Tales*; Hawthorne's *House of the Seven Gables*, or *Twice-Told Tales*, or *Mosses from an Old Manse*; a collection of *Short Stories* by various standard writers.

*Recommended by the National Conference on Uniform Entrance Requirements in English for 1915-1919.

GROUP IV. ESSAYS, BIOGRAPHY, ETC.—Addison and Steele's *The Tatler* and *The Spectator* (about 200 pages); Boswell's *Life of Johnson* (about 200 pages); Franklin's *Autobiography*; Irving's *Life of Washington* (about 200 pages), or *Life of Goldsmith*; Southey's *Life of Nelson*; Lamb's *Essays of Elia* (about 100 pages); Lockhart's *Life of Scott* (about 200 pages); Thackeray's *Lectures on Literature*; Addison, and Steele in the *English Humorists*; Macaulay's *Life of Clive*, *Warren Hastings*, *Milton*, *Addison*, *Goldsmith*, *Frederick the Great*, *Madame d'Arblay* (any one); Trevelyan's *Life of Macaulay* (about 200 pages); Ruskin's *Sesame and Lilies*, or *Selections* (about 150 pages); Dana's *Two Years Before the Mast*; Selections from Lincoln, including at least the two Inaugurals, the Speeches in Independence Hall and at Gettysburg, the Last Public Address, and the Letter to Horace Greeley, together with a brief portrait or estimate of Lincoln; Parkman's *The Oregon Trail*; Thoreau's *Walden*; Lowell's *Selected Essays* (about 150 pages); Dickens' *The Autocrat of the Breakfast Table*; Stevenson's *An Inland Voyage* and *Travels with a Donkey*; Huxley's *Autobiography*; Selections from Lay Sermons, including the addresses on *Imagining Natural Knowledge*, *A Liberal Education*, and *A Piece of Eight*; a collection of Essays by Bacon, Lamb, DeQuincey, Hazlitt, Emerson, and later writers; a collection of Letters by various standard writers.

GROUP V. POETRY.—Palgrave's *Golden Treasury* (First Series); Parts II and III, with special attention to Dryden, Collins, Gray, Keats, Keble, and Burns; Palgrave's *Golden Treasury* (First Series), Part IV, with special attention to Wordsworth, Keats, and Shelley (not chosen for study under B); Goldsmith's *The Traveller* and *The Deserted Village*; Pope's *The Rape of the Lock*; a collection of English and Scottish Ballads as, for example, some Robin Hood Ballads, *The Battle of Otterburn*, *King Estmere*, *Young Beichan*, *William and Grahame*, *Sir Patrick Spens*, and a selection from later ballads; Coleridge's *The Ancient Mariner*, *Christabel* and *Kubla Khan*; Byron's *Childe Harold*, Canto III or IV, and the *Prisoner of Chillon*; Scott's *The Lady of the Lake*, or *Marmion*; Macaulay's *Lays of Ancient Rome*, *The Battle of Naseby*, *The Armada*, etc.; Tennyson's *The Princess*, or *Gareth and Lynette*, *Lancelot and Elaine*, and *The Passing of Arthur*; Browning's *Cavalier and Roundhead*, *The Lost Leader*, *How They Brought the Good News from*

Ghent to Aix, Home Thoughts from Abroad, Home Thoughts from the Sea, Incidents of the French Camp, Hervé Riel, Pheidippides, My Last Duchess, Up at a Villa—Down in a City, The Italian in England, The Patriot, The Pied Piper, "De Gustibus"—, In Tyrannus; Arnold's Sohrab and Rustum, and The Forsaken man; Selections from American Poetry, with special attention to Poe, Lowell, Longfellow, and Whittier.

B. STUDY.—This part of the requirement is intended as a natural and logical continuation of the student's earlier reading, with greater stress laid upon form and style, the exact meaning of words and phrases, and the understanding of allusions. The books provided for study are arranged in four groups, from each of which one selection is to be made.

GROUP I. DRAMA.—Shakespeare's Julius Cæsar, or Macbeth and Hamlet.

GROUP II. POETRY.—Milton's L'Allegro, Il Penseroso, and Comus or Lycidas; Tennyson's The Coming of Arthur, The Passing of Arthur, and The Passing of Arthur; the selections from Wordsworth, Keats and Shelley in Book IV of Palgrave's Golden Treasury (Fourth Series).

GROUP III. ORATORY.—Burke's Speech on Conciliation with America; Macaulay's Two Speeches on Copyright, and Lincoln's Speech at Cooper Union; Washington's Farewell Address, and Webster's First Bunker Hill Oration.

GROUP IV. ESSAYS.—Carlyle's Essays on Burns, with a selection from Burns' Poems; Macaulay's Life of Johnson; Emerson's Essay on Manners.

HISTORY

Ancient History to the Coronation of Charlemagne with special reference to the history of Greece and Rome. (Myer's Ancient History or equivalent.)

Mediaeval and Modern History, a year's work based on a textbook, but including reference reading and note-book work. (Myer's Middle Ages and Myer's Modern Age or equivalent.)

English History, including text, reference and note-book work for one year. (Andrew's History of England or equivalent.)

United States History and Civil Government. (Channing's *United States History* and Ashley's *Federal State* or equivalent.)

GREEK

Greek lessons and grammar.

Phonon, four books of the *Anabasis*, and composition.

Herodotus, three books of the *Iliad*, with prosody; ability to read Greek at sight.

LATIN

Latin lessons and grammar.

Cæsar, *Commentaries* (Books I-IV).

Cicero, seven orations, including those against Catiline and for the poet Archias, and the *Manilian Law*.

Virgil, six books of the *Aeneid* and prosody.

Grammar, composition and sight reading are required as a portion of each year's work.

FRENCH

Elementary. One year of French; elements of grammar; ability to write at dictation and to translate from English; reading of about one hundred and fifty pages of text.

Intermediate. Additional work in French, amounting to one year's advanced work in translation and composition.

Advanced. The ability to read at sight any piece of modern French prose and to write in French a paper on an assigned subject.

GERMAN

Elementary. One year of German, elements of grammar; ability to write at dictation and to translate from English; reading of about one hundred and fifty pages of text.

Intermediate. Additional work in German amounting to one year's advanced work in translation and composition.

Advanced. The ability to read at sight any piece of modern German prose of moderate difficulty and to write in German a paper on an assigned topic.

SPANISH

Spanish (1 or 2 units). Including an accurate knowledge of the essentials of grammar, ability to write ordinary Spanish and to read ordinary Spanish prose.

MATHEMATICS

Elements of Algebra, with special attention to factoring and solution of equations, and including ratio and proportion.

Algebra ($\frac{1}{2}$ unit), being a continuation of the course in the Elements of Algebra with special emphasis on algebraic theory.

Algebra ($\frac{1}{2}$ unit). Quadratics and indeterminate equations, rational and imaginary numbers, ratio, proportion and variation; review; also theory of exponents, progressions, undetermined coefficients and logarithms.

Plane Geometry, with original exercises and problems.

Solid Geometry ($\frac{1}{2}$ unit). With original exercises and problems.

Trigonometry ($\frac{1}{2}$ unit). Elementary course in plane trigonometry.

PHYSICAL AND BIOLOGICAL SCIENCES

Physics, covering an elementary knowledge of dynamics, statics, light, heat, magnetism and electricity; recitation and laboratory work.

Chemistry, including classroom and laboratory work in the Elements of chemistry as presented in modern standard text-books on the subject. At least five exercises a week for one year.

Physical Geography, covering the descriptive and explanatory of the commoner phenomena of nature, including satisfactory laboratory and field work.

Botany, covering the morphology and simpler physiology of higher plants, including some acquaintance with the local flora.

Zoology, emphasizing scientific methods and training.

EXTRA ENTRANCE CREDITS

If by examination or by certificate, a student presents more than fifteen units of commended work for admission may, after the lapse of a semester and upon formal application, receive college credit for certain subjects, provided these subjects, or others closely allied, have been continued in college with high grade, one unit of commended work being allowed three hours of college credit. Extra credit is thus allowed only in foreign language, advanced mathematics and advanced science. Credit, varying in amount with individual courses, is granted for graduate work in appropriate high schools.

CURRICULUM

DEGREE OF BACHELOR OF ARTS

The courses of study offered lead to the degree of Bachelor of Arts under the following hour and credit requirements.

HOUR REQUIREMENTS

One hundred and twenty-six hours of work are required for graduation. An "hour" consists of one recitation or lecture period, or one laboratory period a week for one semester. A recitation or lecture period covers fifty-five minutes; a laboratory period covers, in general, the time of three such periods. In order to complete the course in four years one must take an average of fifteen hours of academic work per semester throughout the four years.

CREDIT REQUIREMENTS

In order to graduate a student must not only earn a certain number of hours, but also attain an average of at least B grade in those hours. To this end a certain number of credits is ascribed to each grade as a basis of determining average grade. The scale is so adjusted that the number of credits required for graduation coincides with the number of hours. Details regarding credits are published in the "Manual of Procedure."

CHOICE OF SUBJECTS

In the selection of his work the student is given a large range. The only limitations are such as will insure to him, on the one hand, the breadth of view which may be gained by an introductory study of each of the great realms of knowledge; and, on the other, that concentration along

some chosen line of work which shall develop power thought and an actual fund of knowledge in some particular field. To this end there are certain subject requirements stated below. The College would emphasize also, the advisability of selecting work representing each of the following broad groups of subjects:

1. Language, Literature and Fine Arts.
2. Mathematics, Physical and Biological Sciences.
3. History, Social Sciences and Philosophy.

SUBJECT REQUIREMENTS

English Composition¹—4 hours, Freshman year.

English Literature¹—6 hours, Freshman or Sophomore year.

French or German—12 hours, Freshman and Sophomore years.

History—6 hours, Freshman or Sophomore year, except for those who enter with credit for three units of History.

Hygiene—2 hours, Freshman or Sophomore year.

Mathematics²—6 hours, ordinarily Freshman year, except for those who enter with credit for three units of Mathematics. Such may substitute a year of work in science for the required mathematics; this science may be used to meet the requirement in science immediately following.

Physics, Chemistry, Zoology, Botany or Physiology²—6 hours, Freshman or Sophomore year, except for those who enter with credit for three units in these subjects. A student who enters with only one unit of science must take 6 hours of another line of science and, in general, it is expected that one will take in college at least 6 hours in science in a different line from any presented for entrance.

¹Suspended for 1918-1919, for those entering with two or more recommended units.

²The requirement may be waived in only one of these groups, whatever the preparation.

Physical Education and Military Training—4 hours in Freshman and Sophomore years and 2 hours in Junior and Senior years.

Economics—6 hours, usually Sophomore or Junior year.

Ethics—3 hours, Sophomore or Junior year.

Psychology—3 hours, Sophomore or Junior year.

In addition to these requirements, there is a general requirement of 36 hours of C and D work, of which at least must be D work.

Students who have shown special ability in one line of work may, with the consent of the head of the department, enroll for a departmental major. This major includes, usually, at least 18 hours in the department chosen, together with certain courses in allied subjects, and usually a reading knowledge of French and German. The student plans his work in consultation with the head of the department concerned. Certain prerequisites, differing with the subject chosen, are indicated for each major. A final examination thesis or both may be required.

Students who desire to become candidates for a departmental major should indicate such intention as early as possible, and must be registered as candidates for such departmental major not later than the first week of registration in their Senior year.

The student who completes a departmental major receives in addition to his diploma the special commendation of the department.

COURSES IN MUSIC AND ART

The College is equipped to offer unusual privileges in the departments of Art and of Theoretical and Applied Music. The influence of the College is greatly enriched by the contributions made through these departments to the cultural

life of the institution as a whole. In Bridges Hall the great musicians of the world are heard, all students being supplied with admission to their concerts. Great enlargement of life comes through intimate acquaintance with these arts, both theoretical and applied forms, and the College urges all regular students to include them, at least to some degree, in their cultural courses, credit toward the B.A. degree being granted on conditions specified under the detailed description of the courses.

TEACHERS' CERTIFICATES IN MUSIC AND ART

The College is authorized by the State Board of Education to issue to individuals who complete a prescribed course of study, credentials entitling them to a certificate to teach music or art in the public elementary and secondary schools of the State of California.

Candidates for the B.A. degree may also be candidates for such certification, but they must ordinarily expect to spend five years in attaining the two, in view of the standards of efficiency required, the practice demands and the practical teaching. Detailed information may be had on application.

SUMMER SESSION

The Summer Session affords opportunity to undergraduate students, especially, but also to high school teachers and others, to pursue work for credit in various departments. The Department of Zoology conducts its work at the Laguna Beach Marine Laboratory, Professor W. A. Hilton, Director. Other departments meet jointly in the College building at Claremont. The session opens immediately after Commencement and continues for six weeks.

MUSIC AND LECTURE COURSE

In order to insure to the entire student body the opportunity of hearing and seeing the great artists of the day whose public appearance is usually confined to the larger cities, the College introduces each year a group of the most distinguished masters in the various departments of achievement. For the lectures, concerts and other entertainments afforded an annual ticket is furnished to every student.

DEGREE OF MASTER OF ARTS

While Pomona College lays the main emphasis on undergraduate work, in certain departments where the library or laboratory facilities are adequate, and where the time of the instructors permits, students whose undergraduate record is of such excellence as to warrant their being made exceptions may be admitted as candidates for the degree of Master of Arts. Such students should consult with the chairman of the Committee on Graduate Work as to the special requirements which will be made in their cases. In addition to the presentation of a thesis, twenty hours of work are required for the higher degree. The twenty hours are divided between a major subject and a minor subject, in the same or a closely allied department. No elementary undergraduate work may be counted, and not less than six hours must be of a strictly graduate character. The requirements may usually be met in one year of regular work, but of students of partial attendance a longer time is required.

COURSES WITHOUT DEGREES

In exceptional cases mature students who desire to receive instruction in courses not leading to a degree will be admitted, provided they give evidence of their fitness for such work.

LECTURES

THE JOSEPH H. JOHNSON FOUNDATION

The Joseph H. Johnson Foundation, liberally endowed by Miss Ellen B. Scripps, provides an annual income for the purpose of furnishing to the College for a protracted and intimate participation in college life notable education from other institutions. By this means such educators are annually in residence in Pomona College. The opportunity of intimate contact with distinguished instructors is afforded to undergraduates is a unique privilege, often passing the privileges of the classroom of the institution from which these educators come.

THE HENRY D. PORTER FOUNDATION

The Henry D. Porter Foundation, named in honor of the late Rev. Henry D. Porter, for many years a missionary in China, secures to the institution annually, the extended services of some prominent worker in the field of Christian Missions. The lecturer upon this foundation commonly shares in the regular class room work related to the history, geography, politics or religion of the region in which he has been active at work. This vivid representation of the missionary life is one of the most stimulating features in the spiritual program of the College.

CURRICULUM

An outline of the work which leads to graduation is here given by years. A more complete description of each course may be found under "Departments of Instruction."

Each "hour" represents one recitation or laboratory period per week for one semester.

FRESHMAN YEAR

Science ¹	2 semester hours
Physical Education ²	2 semester hours
Military Training (for men)	2 semester hours
French or German ³	6 semester hours
English Composition, or History ⁴ or English Literature	6 semester hours
Mathematics ⁵ , or Science ⁵	6 semester hours
Elective	Not less than 6 nor more than 15 semester hours

SOPHOMORE YEAR

Physical Education ²	2 semester hours
Military Training (for men)	2 semester hours
French or German ³	6 semester hours
Mathematics ⁶ , or Science ⁶	6 semester hours
English Literature, or History ⁴ or Economics or Psychology and Philosophy	6 semester hours
Elective	Not less than 6 nor more than 15 semester hours

JUNIOR YEAR

Physical Education	1 semester hour
Elective	not more than 34 semester hours
Should include any course requirements not already completed; and at least 12 hours of advanced (C and D) courses.	

SENIOR YEAR

Physical Education	1 semester hour
Elective	not more than 34 semester hours
Should include 6 hours in D courses and enough advanced (C and D) courses to complete the graduation requirement of "36 hours of C and D work, of which 9 must be D."	

¹Must be taken in Freshman year by the women, and in Freshman or Sophomore year by the men, unless the equivalent is offered.

²One hour required of those taking Military Training.

³Must continue language begun in Freshman year unless two years of some language are accepted for entrance, in which case the requirements may be met by 6 hours of that language and 6 hours of the other foreign language.

⁴Must be taken in Freshman or Sophomore year, unless 3 units of History have been accepted for entrance.

⁵Students offering three units of accepted Mathematics or laboratory science may be excused from further work in one of these subjects, but not in both.

⁶Unless Mathematics or science requirement was met in Freshman year.

COURSES OF INSTRUCTION

DESIGNATION OF COURSES

The letter preceding the number in the designation of a course indicates in general its grade. Elementary courses, designated A (as English A1) are given in Freshman or Sophomore years. Intermediate courses are either those which follow the A courses of earlier years or the more advanced beginning courses; C and D courses are more advanced courses given to Juniors and Seniors, D courses being more difficult. The natural sequence of courses is from A to B, B to C, and C to D, and a student may not enter a C or D course without previous work in the same line.

To pass from an A course to a C course or from a B course to a D course requires the written consent of the teacher.

Seniors may elect an A course only by permission of the Classification Committee, and with a discount of hours.

The letter W before course numbers indicates a modification of the course in hours or content to meet war conditions.

Any course may be withdrawn if the enrollment is less than ten.

The Roman numeral immediately preceding the teacher's name shows the period of recitation, as follows:

	7:30	8:30	9:30	10:30
M, W, F.....	I	III	V	VII
T, Th, S.....	II	IV	VI	VIII
	1:30	2:30	3:30	
M, W, F.....	IX	XI	XIII	
T, Th.....	X	XII	XIV	

When the letter A is found in place of the Roman numeral, the course is offered at hours to be arranged with the teacher. When the numeral is preceded by a letter or letters, the class meets on the day designated.

The work of the college is organized upon the semester basis, but in the year 1918-1919, on account of war conditions, some courses are arranged on the quarter plan.

ART

All lessons are two hours each, receiving with the required practice one hour of credit.

The following description of courses is suggestive only, as the work varies slightly from year to year, as the needs of the individual classes demand.

All courses except Art C11, C12 and C13 are given by Assistant Professor Jenkins, the head of the Department.

Courses in Graphics, Machine Drawing, Descriptive Geometry, and Perspective are described under the Department of Engineering.

A1a, A1b. DRAWING FROM CAST AND OBJECT.

Freshman and Sophomore years. 1 hour each.

A2a, A2b. PAINTING IN WATER COLORS. Color problems in hues, tints, intensities and values; still life; introduction to landscapes and flowers from nature.

Freshman and Sophomore years. 1 hour each.

B3a, B3b. DRAWING FROM CAST. Full length figure and applied perspective.

Freshman and Sophomore years. 1 hour each.

B4a, B4b. LANDSCAPE AND FLOWERS IN WATER COLOR AND PASTEL.

Sophomore and Junior years. 1 hour each.

B5a, B5b. ELEMENTARY DESIGN.

Sophomore year. 1 hour each.

B6. SKETCH CLASS.

All years. Both semesters. 0 hours. Fee \$1.00.

B9a, B9b. ART APPRECIATION. The terminology and technique of all lines of art are discussed. A critical study of interior decorating.

Sophomore and Junior years. 1 hour each.

C11. HISTORY OF ART. Outline study of Greek art. attempt is made to trace the historic development of various forms of Greek art through its chief periods.

Junior and Senior years, first semester. 3 hours.

Professor Spalding.

(Not given in 1918-1919.)

C12. HISTORY OF ART. Outline study of Gothic and renaissance architecture, sculpture and painting.

Junior and Senior years, second semester. 3 hours.

Professor Spalding.

(Not given in 1918-1919.)

C13. HISTORY OF ART. Principles of classical transition and Gothic architecture.

Junior and Senior years, first semester. 3 hours. VII.

Professor Spalding.

C15a, C15b. ANATOMY OF HEAD AND FULL LENGTH FIGURE. Drawing from life in charcoal.

Junior and Senior years. 1 hour each.

C16a, C16b. PAINTING IN OIL COLORS.

Junior and Senior years. 1 or 2 hours each.

D17a, D17b. PORTRAIT PAINTING.

Junior and Senior years. 1 or 2 hours each.

Model fee, \$2.00 per hour per semester.

D18a, D18b. LANDSCAPE IN OILS.

Junior and Senior years. 1 hour each.

D19a, D19b. TEACHING OF ART. A practice course for prospective teachers, including a study of planning work in the studio and actual practice teaching under supervision.

Junior and Senior years. 2 hours each.

D20a, D20b. ADVANCED DESIGN.

Junior and Senior years. 1 hour each.

ASTRONOMY

B1a, B1b. GENERAL ASTRONOMY. A general course of lectures and recitations in descriptive astronomy with regular evenings at the observatory, and simple observations systematically recorded in notebooks.

This course is designed for students who have had only elementary courses in physics, chemistry and trigonometry. Class room, two hours a week; lecture and observatory amounting to one exercise week.

Junior and Senior years, both semesters. 3 hours. VII.

Professor Brackett.

In 1918-1919 B1a and B1b are given the first and second quarters. (Work of the third quarter is designated as C1b.)

VB16. MAP READING AND NAVIGATION.

High school years, first quarter. 4 hours. Class room, V; laboratory, T. Th, 1:30-4:30.

Professor Brackett.

(Receives $2\frac{2}{3}$ semester hour credits.)

B17a, B17b. NAVIGATION AND NAUTICAL ASTRONOMY.

Sophomore, Junior and Senior years, second semester. 3 hours. V.

Professor Brackett.

In 1918-1919 B17a and B17b given one quarter each, receiving 2 semester hour credits.)

B13. DESCRIPTIVE ASTRONOMY. A study of the essential facts and principles of astronomy with lectures and readings on the history of its development as a science and discussion of theories of cosmogony and evolution. Systematic observation of certain objects with the equatorial.

This course is designed for students who have a working knowledge of analytic geometry and calculus and of the more important principles in physical science; or it may be taken as an advanced course by those who have had Astronomy B1. Some preparation in algebra and mechanical drawing also is very desirable.

Junior and Senior years, first semester. 3 hours.

Professor Brackett.

(Not given in 1918-1919.)

D4. THEORETICAL AND PRACTICAL ASTRONOMY. Spherical co-ordinates; least squares; determination of time, latitude and longitude with sextant and theodolite; regular observation work with equatorial and transit.

Prerequisites: Astronomy B1 or C3.

This course may be taken in conjunction with Astronomy B1b students who have had sufficient preparation in mathematics and drawing. Ordinarily alternates with Astronomy D6.

Class room, one hour a week; lecture and observatory amounting to two exercises a week.

Junior and Senior years, second semester. 3 hours.

Professor Brackett.

(Not given in 1918-1919.)

D6. ASTROPHYSICS. A review of the principles of spectrum analysis, and the results obtained in physical and chemical laboratories; a study of astronomical spectroscopy of forms of spectrographs and spectroheliographs, and recent advances in the subject; observatory work with horizontal solar telescope and spectrograph.

This course may be taken in conjunction with Astronomy B1b students who have sufficient preparation in physical science. Class room, one hour a week; lecture and observatory amounting to two exercises a week. Prerequisites: Astronomy B1. Ordinarily alternates with Astronomy D4.

Junior and Senior years, second semester. 3 hours.

Professor Brackett.

Laboratory fee \$5.00.

(Not given in 1918-1919.)

BIBLICAL LITERATURE

GENERAL BIBLE STUDY

Though courses B3, B4, C5, and C6 are complete in themselves no hours or credits are accepted for graduation unless at least two courses are completed.

A1a, A1b. CONTENTS OF THE BIBLE. The purpose is to make the student acquainted with the contents of the English Bible. The material, style and purpose of the various facts will be discussed.

freshman year, both semesters. 1 hour each. W, IX.

Professor Colcord.

33. THE PRESERVATION AND TRANSMISSION OF THE OLD TESTAMENT. A general study of the manuscripts, versions, and other authorities, together with the history of biblical translations.

sophomore year, first semester. 1 hour.

Mr. Marriott.

(Not given in 1918-1919.)

34. THE PRESERVATION AND TRANSMISSION OF THE NEW TESTAMENT. A general study of the manuscripts, versions, and other authorities, together with the history of Biblical translations.

sophomore year, second semester. 1 hour.

Professor Norton.

(Not given in 1918-1919.)

35. OLD TESTAMENT INTRODUCTION. Historical and Literary Study of the Old Testament. Lectures, reading selected portions of the Old Testament narrative, and the reading of a brief volume of Old Testament Introduction.

junior year, first semester. 1 hour.

Professor Parker.

(Not given in 1918-1919.)

36. NEW TESTAMENT INTRODUCTION. An introduction to the historical study of the New Testament writings, purporting to give briefly the theories of origin of the various

books and of the formation of the collection called "New Testament."

Junior year, second semester. 1 hour.

Mr. Marriott.

(Not given in 1918-1919.)

C7 and C8. THE TEACHINGS OF JESUS. The sources of our knowledge of the life of Jesus, the critical problems involved in a study of these sources, and a systematic study of the life and teachings of Jesus in the light of His day and ours. Lectures and text-book.

Open to Seniors, and to Juniors with permission of instructor. Both semesters. 1 hour.

(Not given in 1918-1919.)

B9. POETRY OF THE BIBLE.

Sophomore and Junior years, first semester. 1 hour. M, I.
Professor Stearns.

B10. HEBREW LITERATURE.

Sophomore and Junior years, second semester. 1 hour. M, I.
Professor Stearns.

BIBLICAL HISTORY AND LITERATURE

B21. ANCIENT ORIENTAL HISTORY AND LITERATURE. The beginnings of the earliest civilization, and its development in the lands of the Biblical environment, including Babylonia, Assyria and Egypt. A background for a comprehensive study of Biblical History and Literature.

Sophomore year, first semester. 3 hours. III.

Professor Stearns.

B22. ANCIENT ORIENTAL HISTORY AND LITERATURE. A continuation of B21, dealing with Persia and Palestine.

Sophomore year, second semester. 3 hours. III.

Professor Stearns.

23. HEBREW HISTORY AND LITERATURE. From early
mitic times: in history, to the capture of Jerusalem by
s; in literature, to the completion of the Old Testament
on.

Junior and Senior years, first semester. 3 hours.

Professor Stearns.

(Not given in 1918-1919.)

24. EARLY CHRISTIAN HISTORY AND LITERATURE. The
elopment during the first four centuries.

Junior and Senior years, second semester. 3 hours.

Professor Stearns.

(Not given in 1918-1919.)

28. CHRISTIAN MISSIONS. History of efforts to extend
knowledge of Biblical literature, with special attention to
ern missionary movements.

Junior and Senior years, first semester. 3 hours.

Professor Stearns.

25. HISTORY OF RELIGIONS. Development of the great
ious systems of the world, with such ethical analysis as
be necessary for comparisons with Biblical values. The
ct is to widen historical information, and to emphasize
place the Bible holds in religion.

Junior and Senior years, first semester. 3 hours.

Professor Stearns.

(Not given in 1918-1919.)

26. HISTORY OF CHRISTIANITY. The historical devel-
ent of Christianity into a world religion. Lecture course
required readings.

Junior and Senior years, second semester. 3 hours.

Professor Stearns.

(Not given in 1918-1919.)

C31. HEBREW GRAMMAR. A course for beginners. Exercises in reading and writing Hebrew.

Prerequisite: A B course in either Greek, Latin or German.

Junior and Senior years, first semester. 3 hours. A.

To be given if elected by a sufficient number.

Professor Stearns.

C32. HEBREW READINGS. Translations of representative selections from Old Testament Literature, to enable student to read the Hebrew Bible intelligently.

Prerequisite: Biblical Literature, C31.

Junior and Senior years, second semester. 3 hours. A.

Professor Stearns.

C33. THE POETRY OF THE BIBLE. With special study of portions of Isaiah, The Psalms, and Job.

Junior and Senior years, first semester. 3 hours. I.

Professor Stearns.

D42. SEMITIC INSTITUTIONS AND CULTURE. Special studies in Semitic customs, arts, and letters, more or less connected with Old Testament history.

Prerequisite: Biblical Literature, B22 or C23.

Junior and Senior years, second semester. 3 hours.

Professor Stearns.

(Not given in 1918-1919.)

BIOLOGY

A1. GENERAL BIOLOGY. A course introductory to study of animal life, comprising field and laboratory work on living organisms, and especially scientific methods of observing and recording facts.

Prerequisite to further work in zoology. Class room, two hours a week; laboratory, one exercise a week.

Freshman year, first semester. 3 hours. Class room M, W, V, laboratory, T, W, or Th, 1:30-4:30.

Professor Hilton and Assistant.

Laboratory fee, \$5.00.

GENERAL BIOLOGY. An elementary course designed to acquaint the general student with the main ideas of biology through the study of a series of organisms and through practical studies of the phenomena on which biological principles are based, such as those of evolution, adaptation, life processes, etc.

This course is largely a continuation of A1 and intended primarily for those who desire a glimpse into the general field of Biology. Those intending to take up Botany are advised to enter directly for B21. Laboratory and field work, one period a week; lecture periods a week.

freshman year, second semester. 3 hours. Class room, M, W, laboratory, T, W or Th, 1:30-4:30.

Assistant Professor Munz and Assistants.

Laboratory fee, \$5.00.

BACTERIOLOGY. A general course dealing with the life of bacteria in nature, their classification and methods of study; the use of culture media, stains, etc.; general milk and water analysis; and a consideration of representative diseases.

Laboratory periods and one lecture a week.

Prerequisite: Biology A2.

Sophomore and Junior years, first semester. 3 hours. A.

Assistant Professor Munz.

Laboratory fee, \$5.00.

BACTERIOLOGY. A continuation of Biology C5.

Prerequisite: Biology C5.

Senior and Senior years, second semester. 3 hours. A.

Assistant Professor Munz.

C7. BIOLOGICAL LITERATURE. A study of recent vances in the whole field of Biology. An intensive study of selected books, papers and monographs form the material for this course. General reviews and class discussions.

Prerequisite: A year of biological work.

Sophomore and Junior years, first semester. 1 to 3 hours. I

Professor Hilton.

D8. BIONOMICS. Modern biological problems. This course includes an outline of the progress of thought in various departments of Biology and a study of the important modern problems in the whole field. Lectures, discussions and individual reports.

Prerequisite: At least a year of biological work.

Junior and Senior years, or Sophomore year for those who had C7, second semester. 3 hours. I.

Professor Hilton.

BOTANY

B21. GENERAL BOTANY. A general course covering briefly in two semesters the fundamental facts and principles of plant life, with a careful study of form, structure and reproduction of representatives from the principal groups. Emphasis is placed on the evolutionary tendencies exhibited.

A necessary introductory course for advanced work in botany. Both laboratory and field work. Laboratory, one exercise a week, lectures, two hours a week.

Freshman and Sophomore years, first semester. 3 hours. W I; laboratory, T, W, 1:30-4:30.

Assistant Professor Munz and Assistant.

Laboratory fee, \$3.50

2. GENERAL BOTANY. A continuation of B21, dealing primarily with the vascular plants.

Prerequisite: Botany B21 or equivalent.

Junior and Sophomore years, second semester. 3 hours. W, Laboratory, T or W, 1:30-4:30.

Assistant Professor Munz and Assistant.

Laboratory fee, \$3.50

4. PLANT HISTOLOGY. A study of the structure and histology of plant tissues and organs, emphasis being placed on the relation of structure to function, and on the classification produced by phylogenetic and ecological factors. Some attention is given to methods in microtechnique.

Laboratory periods and one lecture a week.

Prerequisite: Botany B22. Alternates with Botany C25.

Junior and Senior years, first semester. 3 hours. A.

Assistant Professor Munz.

Laboratory fee, \$7.00

5. PLANT PHYSIOLOGY. A study of the behavior and processes of plants, their nutrition, growth, reproduction, etc.

Laboratory and well equipped laboratory are available for this

Laboratory, two periods a week; lecture, one hour a week.

Prerequisite: Botany B22. Alternates with Botany C26.

Junior and Senior years, second semester. 3 hours. A.

Assistant Professor Munz.

Laboratory fee, \$7.00.

5. COMPARATIVE MORPHOLOGY. A course in comparative and developmental studies of Bryophytes, Pteridophytes, and Spermatophytes. Emphasis is placed on reproduction and evolution.

Laboratory periods and one lecture a week.

Prerequisite: Botany B22. Alternates with Botany C24.

Junior and Senior years, first semester. 3 hours.

Assistant Professor Munz.

Laboratory fee, \$5.00.

(Not given in 1918-1919.)

C26. TAXONOMY. A study of the classification and nomenclature of the local seed plants and ferns with some reference to their ecology. Herbarium methods are also considered. Both laboratory and field work.

Two laboratory periods and one lecture a week.

Prerequisite: Botany B22. Alternates with Botany C23.

Junior and Senior years, second semester. 3 hours.

Assistant Professor Munz.

Laboratory fee, \$5.00.

(Not given in 1918-1919.)

D29. MYCOLOGY AND PLANT PATHOLOGY. A systematic study of the great group of fungi, with special emphasis on those forms causing plant diseases, on methods of control and of study in the laboratory.

An extensive herbarium of fungi available for reference. Important for those intending to enter agricultural work. Laboratory and field work, two periods a week; lecture, one hour a week.

Junior and Senior years, second semester. 3 hours.

Assistant Professor Munz.

Laboratory fee, \$5.00.

(Not given in 1918-1919.)

D30. PLANT PROPAGATION AND BREEDING. The methods and principles of the propagation of plants and the improvement of plant varieties. Practice in the care of seeds, cuttings, bulbs, and potted plants; in grafting and budding; in hybridizing and in selection.

A glass house, lath house and special laboratory equipment available. Designed for those interested in nursery work, landscape gardening, etc.

Two laboratory periods and one lecture a week.

Prerequisite: Botany B22.

Junior and Senior years, second semester. 3 hours.

Assistant Professor Munz.

Laboratory fee, \$10.00.

(Not given in 1918-1919.)

D31, D32. INVESTIGATION AND RESEARCH. Minor investigations in the various fields of Botany. A course for those only who have had sufficient botanical training to warrant the undertaking of some original investigation. Work individual. Permission of instructor necessary. A requirement for those majoring in Botany.

Junior and Senior years, both semesters. 1 to 3 hours each. A. Assistant Professor Munz.

Laboratory fee, \$2.00 for each hour of credit.

CHEMISTRY

Students who wish to major in Chemistry should be prepared to meet the following requirements:

1. A knowledge of elementary Physics, equivalent to Physics A1.
2. Sufficient acquaintance with French and German to enable the student to follow with tolerable ease the literature of the subject.
3. Mathematics, including the elements of the Calculus.
4. Twenty-one or more hours of C and D courses in Chemistry, of precise nature and number to be determined in individual cases.
5. In some cases a special examination covering the general field of Chemistry.

A breakage deposit of \$5.00 is required of all students taking laboratory courses. At the conclusion of the work the deposit, less breakage, is returned.

A1. THE ELEMENTS OF CHEMISTRY. An introductory course covering the general field, and intended for those who have no previous knowledge of the subject.

Credit for this course is given towards graduation only upon the completion of Chemistry A2 or A3 or B9. Class room, three hours a week; laboratory, two exercises a week.

Freshman year, first semester. 5 hours. I, II; laboratory, M, T, W, Th, 1:30-4:30.

Professor Lyman and Assistant.

Laboratory fee, \$10.00.

A2. THE ELEMENTS OF CHEMISTRY. A continuation of Chemistry A1.

Prerequisite: Chemistry A1.

Classroom, three hours a week; laboratory, two periods a week.

Freshman year, second semester. 5 hours. I; laboratory, T, Th, F, 1:30-4:30.

Professor Lyman and Assistant.

Laboratory fee, \$10.00.

A3. CHEMISTRY OF METALS.

Prerequisite: Chemistry A1, or one year of high school chemistry.

Must be accompanied by Chemistry B5, or B31a, or both.

Freshman year, first semester. 3 hours. III.

Mr. Woodford.

B4. CHEMISTRY OF NON-METALS.

Prerequisite: Chemistry A3. Must be accompanied by Chemistry B6, or B31b, or both.

Freshman year, second semester. 3 hours. III.

Mr. Woodford.

B31a, B31b. INORGANIC PREPARATIONS. Preparation of some of the simpler inorganic compounds, which illustrate the matter brought out in the class room in the course listed above.

Intended primarily for those who are taking Chemistry A3 and B4.

Freshman year, both semesters. 1 hour. M or T, 1:30-4:30.

Professor Lyman and Mr. Woodford.

Laboratory fee, \$5.00 each semester.

(In 1918-1919 given only in second semester.)

B5. QUALITATIVE ANALYSIS. Analysis for metals and positive ions. Intended to accompany Chemistry A3.

Laboratory periods twice a week, from which time may be taken for one class meeting a week.

Freshman year, first semester. 1 or 2 hours. Laboratory (for two periods, from which two are to be chosen), M, T, Th, F, 1:30-4:30.

Mr. Woodford.

Laboratory fee, \$10.00.

B6. QUALITATIVE ANALYSIS. Inorganic Analysis with special reference to non-metals and negative ions. Intended to accompany Chemistry B4.

Laboratory periods twice a week, from which one hour may be chosen for class meeting.

Freshman and Sophomore years, second semester. 1 or 2 hours. Laboratory (four periods, from which two are to be chosen), M, T, W, F, 1:30-4:30.

Professor Lyman and Mr. Woodford.

Laboratory fee, \$10.00.

(Not given in 1918-1919.)

B7. QUANTITATIVE ANALYSIS. Theory and practice of quantitative methods, chiefly gravimetric, including problems of stoichiometry. Intended to give the student a knowledge of the fundamental methods of work.

Prerequisite: Qualitative Analysis. Occasional lectures; laboratory, three exercises a week.

Sophomore, Junior and Senior years, first semester. 3 hours. A. Miss Haury.

Laboratory fee, \$12.00.

B8. QUANTITATIVE ANALYSIS. Theory and practice of quantitative methods, chiefly volumetric.

Prerequisite: Chemistry B7.

Sophomore, Junior and Senior years, second semester. 3 hours. A. Miss Haury.

Laboratory fee, \$12.00.

B9. ALIPHATIC COMPOUNDS. (Organic.)

Prerequisite: Chemistry A1 or A3 and B5. Classroom, two hours a week; laboratory, one exercise a week.

Sophomore and Junior years, either semester. 3 hours. First semester, class, M, W, VII; second semester, class, T, Th, II; laboratory, A.

Professor Lyman.

Laboratory fee, \$6.00.

C10. UNSATURATED AND AROMATIC COMPOUNDS.

Prerequisite: Chemistry B9.

Classroom, two hours a week; laboratory, one exercise a week.

Sophomore and Junior years, second semester. 3 hours. C
M, W, VII; laboratory, A.

Professor Lyman.

Laboratory fee, \$6.00.

C14a, C14b. SOIL SCIENCE.

Prerequisite: Chemistry B5.

Sophomore and Junior years, both semesters. 3 hours. C
M, W, VII; laboratory, A.

Mr. Woodford.

Laboratory fee, \$5.00 each semester.

C14a, C14b. SOIL SCIENCE.

(In 1918-1919, C15a given as a two-hour laboratory course for first or second quarter, receiving one and one-third semester hours credits; C15b given for two quarters, receiving four semester hours credits.) Classroom, two hours a week; laboratory, one period a week.

Junior and Senior years, both semesters. 3 hours each.

Mr. Woodford.

Laboratory fee, \$7.50 each semester.

C16a, C16b. FOOD CHEMISTRY. A technical study of the composition, sources and comparative value of foodstuffs. Must be preceded or accompanied by Chemistry B9 and C1

Junior and Senior years, both semesters. 2 hours. IX.

Miss Haury and Mr. Billings.

C17a, C17b. FOOD ANALYSIS. A laboratory course.

Junior and Senior years, both semesters. 1 hour. A.

Miss Haury.

Laboratory fee, \$7.50 each semester.

C11. ADVANCED QUANTITATIVE ANALYSIS. A continuation and further development of Chemistry B7 and B8. This may take the form of rock analysis, agricultural analysis (soils, etc.) or some other practice in standard quantitative methods.

Laboratory, three exercises a week.

Junior and Senior years, first or second semester. 3 hours. A.

Professor Lyman.

Laboratory fee, \$12.00.

D12. ADVANCED QUANTITATIVE ANALYSIS. This may take the form of special agricultural analysis (fertilizers, insecticides, fungicides, etc.); or of gas analysis, including general technical processes and the determination of the densities of gases.

Prerequisites: Chemistry B7 and B8. Laboratory, three exercises a week.

Junior and Senior years, first or second semester. 3 hours.

Professor Lyman.

Laboratory fee, \$12.00.

D13. ADVANCED ORGANIC CHEMISTRY. Intended to supplement Chemistry B9 and C10 so that the student may be better fitted for university work. A study of certain typical reactions, with the preparation of compounds illustrating the changes studied.

Prerequisites: Chemistry B9 and C10. Lectures, one hour a week; laboratory, two exercises a week.

Junior and Senior years, first semester. 3 hours.

Professor Lyman.

Laboratory fee, \$12.00.

D20. ELEMENTS OF PHYSIOLOGICAL CHEMISTRY. preparation and study of certain organic substances, especially of those which have to do with physiological chemistry. Intended to prepare the student for work in physiological chemistry but not to take the place of the courses given in medical school in that subject.

Prerequisites: Chemistry B9 and C10. Lectures, one hour a week; laboratory, two exercises a week.

Junior and Senior years, second semester. 3 hours.

Professor Lyman.

Laboratory fee, \$10.00.

D19a, D19b. PHYSICAL CHEMISTRY. A survey of the whole subject is given, including the relation of mass to volume, phase relations, thermochemistry and thermodynamic chemistry of solutions and the dissociation hypothesis, electro-chemistry and optical chemistry. The laboratory work consists of the study of physico-chemical methods as related to the subject matter of the lectures.

Class room, two hours a week; laboratory, one exercise a week. Physics A1 and Analytical Geometry and Calculus must precede and accompany this course.

Open to Juniors and Seniors who have passed satisfactorily Chemistry B7 and B8. 3 hours each. A.

Miss Haury.

Laboratory fee, \$8.00.

D23-D24. ADVANCED LABORATORY INVESTIGATION AND RESEARCH.

This course is open to a limited number of students who present the written certification of the instructor in charge as to adequacy of preparation and experience. 1 to 3 hours each, to be agreed upon at time of registration.

(a) ORGANIC. The work for 1917-1918 was the preparation of esters of paranitrobenzyl alcohol. Also, a study of improved methods for the preparation of some common organic compounds such as acetamid.

Both semesters.

Professor Lyman.

(Not given in 1918-1919.)

(b) PHYSICO-CHEMICAL. The work during the year 1917-1918 took the form of electro-chemistry. Certain oxidation cells are to be studied. Considerable experience in laboratory manipulation will be acquired.

Both semesters.

Assistant Professor Bartlett.

(Not given in 1918-1919.)

(c) MINERALOGICAL. The collection and identification of local minerals, together with at least one quantitative chemical analysis.

Second semester.

Mr. Woodford.

(Not given in 1918-1919.)

D8a, D18b. CHEMISTRY CONFERENCE. Designed primarily to establish in the minds of those students who wish to be teachers the fundamental principles and the details of chemical theory which are generally taught in the first two years of college Chemistry. This may be supplemented by advanced work along special lines in accordance with the particular desires of the class.

Senior year, both semesters. 1 hour each. A.

Professor Lyman.

CONSTITUTIONAL HISTORY

(See History.)

ECONOMICS AND SOCIOLOGY

In 1918-1919 courses B3, C4, C5, C6, C8, C25, C28, D26, D27, D30 are given for one quarter each, receiving 2 semester credits each.

B1a, B1b. INTRODUCTION TO ECONOMICS. An elementary course which covers the entire field. Conducted for those desiring a general knowledge of the subject. Lays the foundation for specialization in the department.

Sophomore and Junior years, both semesters. 3 hours each. I.

Professor Sumner and Assistant Professor Burgess.

(In 1918-1919 WB1a, receiving 1½ semester hour credits, may be substituted for B1a.)

B3. PRINCIPLES OF ECONOMICS. A rapid survey of the field covered in Economics B1, intended to meet the needs of mature students, particularly those specializing in other fields.

Junior and Senior years, first semester. 3 hours. VI.

Professor Sumner.

B31a, B31b. ACCOUNTING.

Sophomore and Junior years, both semesters. VII.

Assistant Professor Thomson.

C32a, C32b. ADVANCED ACCOUNTING.

Junior and Senior years.

(Not given in 1918-1919.)

C4. MONEY AND BANKING. The history and theory of money and banking, especially in their bearing on the practical problems of today.

Prerequisite: Economics B1.

Junior and Senior years, first semester. 3 hours. III.

Professor Sumner.

C5. BANKING AND FOREIGN EXCHANGE.

Junior and Senior years, second semester. 3 hours. III.
Professor Sumner.

C6. PUBLIC FINANCE. A study of taxation and other methods of meeting governmental expenditures in the light both theory and practice. The budget, local and national taxation and public debts are among the subjects taken up.

Junior and Senior years, second semester. 3 hours. III.
Professor Sumner.

C8. PROBLEMS OF LABOR. The factory system, modern organization of labor, woman and child labor, labor legislation, workingmen's insurance, and other appropriate problems.

Prerequisites: Economics B1 or B3.

Junior and Senior years, second semester. 3 hours. II.
Professor Sumner.

C9. CORPORATION FINANCE. An examination of the forms, methods of promotion, financing and legal status of corporations.

Prerequisites: Economics B1.

Junior and Senior years, first semester. 3 hours.
Professor Sumner.
(Not given in 1918-1919.)

D7. TRUST PROBLEMS. A study of the growth of modern methods of large scale production and distribution. The benefits and dangers of monopolies and of trusts. Pools, trusts, and other forms of combination considered, together with plans for their regulation.

Junior and Senior years, first semester. 3 hours.
Assistant Professor Burgess.
(Not given in 1918-1919.)

D10. TRANSPORTATION. A study of the principal problems involved in securing and regulating the land and water transportation of the United States. Normally follows Economics D7.

Junior and Senior years, second semester. 3 hours.
Assistant Professor Burgess.
(Not given in 1918-1919.)

D11a, D11b. CORPORATIONS.

Junior and Senior years, second and third quarters, 2 semesters each. XII.

Assistant Professor Burgess.

D12. SOCIAL PSYCHOLOGY.

(See Psychology D12.)

Junior and Senior years, second semester. 3 hours.

Professor Ewer.

(Not given in 1918-1919.)

D19a, D19b. APPLIED SOCIOLOGY. The work consists of first-hand study of local industrial and social problems together with the reading and discussion of the latest literature treating of these subjects.

Senior year, both semesters. 1 hour each.

Professor Sumner.

(Not given in 1918-1919.)

B16a, B16b. RED CROSS HISTORY AND MANAGEMENT. A study of the development of the Red Cross, and the history of its relief work in the various countries both in war and peace.

Sophomore and Junior years, both semesters. 1 hour each. VI
Assistant Professor Berry.

B21a, B21b. **ELEMENTS OF SOCIOLOGY.** The development of society, its functions, institutions and forces. Illustrations are drawn from primitive society as well as from America of today.

Sophomore and Junior years, both semesters. 3 hours each. VI.
Professor Sumner.

(In 1918-1919, second and third quarters. 2 semester hours each.)

C25. **POOR RELIEF.** An examination of the causes of pauperism and their remedy, the obligation of society and the methods of relief.

Junior and Senior years, first semester. 3 hours. II.
Professor Sumner.

C28. **CITY PROBLEMS.** The chief social and economic problems incident to modern city life. In addition to the general class work, each student is required to select some problem for special investigation.

Junior and Senior years, second semester. 3 hours. II.
Professor Sumner.

C29. **STATISTICS.** An introductory study of the collection of data, their arrangement and their use.

Junior and Senior years, first semester. 3 hours.
(Not given in 1918-1919.)

D26. **CRIMINOLOGY.** A study of crime from the social point of view, including its cause and the treatment of the criminal. Normally follows Economics C25.

Junior and Senior years, second semester. 3 hours. II.
Professor Neely.

D27. **THEORIES OF SOCIAL REFORM.** From Plato's Republic to Modern Socialism. The principal schemes, Utopian and scientific, for the radical change of social organizations.

Junior and Senior years, first semester. 3 hours. IV.
Professor Sumner.

D30. IMMIGRATION. A study of the causes and effects of immigration. Special emphasis is given to the present day American issues.

Junior and Senior years, second semester. 3 hours. IV.
Professor Sumner.

ENGINEERING

The College does not give at present a full technical course in engineering; but for students who contemplate engineering work wish also the foundation and culture of college training a course of studies has been arranged. Graduates who have followed this course complete their work for a degree in the standard schools of engineering and technology in two years.

In 1918-1919 when the course number is preceded on the record by W (as WA1) there is a departure from the normal number of hours.

A1a, A1b. GRAPHICS. A course in lettering and line drawing, including the use and care of the instruments. Practice in lining and accurate constructions, geometrical problems and construction of geometrical curves.

Freshman year, both semesters. 2 hours each. Laboratory, T, 1:30-4:30.

Assistant Professor Belcher.

In case a student offers for credit other work in Graphics instead of Engineering A1, the certificate of former work must be accompanied by the plates drawn and the instructor will judge whether the character and amount of work done are satisfactory. This must in every case include evidence of ability in lettering.

B3a, B3b. GRAPHICS. An introductory course in orthographic and isometric projections, shade lines and shadows.

Prerequisite: Engineering A1.

Sophomore year, two exercises a week, both semesters. 2 hours each. Laboratory, Th, F, 1:30-4:30.

Assistant Professor Belcher.

B11a, B11b. SURVEYING. Class room work; field work with compass, transit, level and sextant; platting and computation from field notes; topographical surveying and map work (Gillespie; Johnson).

Alternates with Engineering C15 and C16. Prerequisites: Mathematics B7 and Engineering A1.

Sophomore year, both semesters. 3 hours. A.

Assistant Professor Belcher.

C15. DESCRIPTIVE GEOMETRY. Study and practice in the elements of projection and perspective; intersections of surfaces and solids.

Alternates with Engineering B11a. Prerequisite: Engineering A1. Sophomore year, first semester. 3 hours.

Assistant Professor Belcher.

(Not given in 1918-1919.)

C16. PERSPECTIVE. Principles of shades and shadows, perspective and the perspective of shadows; much practice in perspective drawing.

Alternates with Engineering B11b. Prerequisite: Mathematics C15. Sophomore year, second semester. 3 hours.

Assistant Professor Belcher.

(Not given in 1918-1919.)

D13 and D14. APPLIED MECHANICS. A study of the principles of mechanics of rigid bodies with many problems selected with reference to the needs of engineering students. The calculus and graphical methods are freely used. The course includes problems in statics, on reactions, stresses in beams, center of gravity, moments of inertia, and problems in kinematics and dynamics, including rectilinear and curvilinear motion, harmonic motion, momentum and angular momentum, work power and kinetic energy.

Junior and Senior years, both semesters. 3 hours.

Assistant Professor Belcher.

(Not given in 1918-1919.)

ENGLISH

ENGLISH LANGUAGE AND RHETORIC

Students who elect English Language as a major are required to offer English C41, D42, and D44; and, from the Department of English Literature, English A2, or B3. They will ordinarily be expected to offer also English B6. The requirements for the major in English Literature are stated under that Department. Advice as to other work should be sought from the head of the Department. Students will be admitted to C and D courses in this Department who have done satisfactory work in B and C courses in the Department of English Literature.

When the course number is preceded on the records by W (WA21) the course was taken in 1918-1919 for less than the normal number of hours.

A21a, A21b. COMPOSITION. A study of the elements of effective prose composition. Individual conferences with the instructor.

Freshman year, both semesters. 2 hours each. V.
Professor Frampton.

A22a, A22b. COMPOSITION.

Prerequisite: English A21 or equivalent.

Sophomore year, both semesters. 2 hours each. II, IV, V.
Assistant Professor Ament and Miss Hitchcock.

(In 1918-1919 given in the first and second quarters, receiving 1 semester hour credits each.)

A24a, A24b. COMPOSITION. Special attention to commercial correspondence.

Prerequisite: English A21 or equivalent.

Sophomore year, both semesters. 2 hours each. A.
Assistant Professor Thomson.

(In 1918-1919 given in the second and third quarters, receiving 1 1/3 semester hour credits each.)

A35. ELEMENTARY PUBLIC ADDRESS. An elementary course designed to acquaint the student with his own needs. Frequent practice given in simple reading, declamation and extempore speaking. The aim is to make the voice and body responsive to thought and feeling. Individual deficiencies pointed out, and modes of correction prescribed.

Freshman year, first semester. 3 hours. III.

Assistant Professor Burgess.

A51a, A51b. ENGLISH FOR FOREIGNERS.

Both semesters. 3 hours each. XI.

Assistant Professor Ament and Professor Spalding.

B23. COMPOSITION. Introductory study of the short-story, the essay and literary criticism. Frequent original work. Conferences.

Prerequisite: B grade or better in English A22 or equivalent.

Sophomore year, first semester. 3 hours. III.

Professor Frampton.

In 1918-1919 given in the first and third quarters, receiving 2 semester hour credits each.)

C26. JOURNALISM. A study of the forms and methods of newspaper writing. Special consideration of reporting, the news story, the special article, the editorial, newspaper layout, editing.

Junior and Senior years, first semester. 3 hours. III.

Assistant Professor Ament.

In 1918-1919 given in the second quarter, receiving 2 semester hour credits.)

C25. ESSAY. Analytical and constructive study of the essay; frequent original writing to aid the student in forming style and clarifying his ideas.

Junior and Senior years, first semester. 3 hours. A.

Assistant Professor Ament.

In 1918-1919 given in the third quarter, receiving 2 semester hour credits.)

D27. LITERARY CRITICISM. A study of the practice of literary criticism in the nineteenth century for the purpose of formulating a thorough critical background for the study of literature. The theories and tenets of the various schools are studied and their bearings pointed out. Lectures. Frequent practice in critical writing.

Junior and Senior years, first semester. 2 or 3 hours. A.
Professor Frampton.

C28. THE SHORT-STORY. A study of the form and technique of the short-story. Study of American short-story writers. Frequent original work.

Open to Sophomores who have had English B23.

Junior and Senior years, second semester. 3 hours. III.
Professor Frampton.

(In 1918-1919 given in the second quarter, receiving 2 semester hour credits.)

D29. WRITING OF PLAYS. A course in the technique of drama, with especial attention to original work.

First semester. 3 hours.

(Not given in 1918-1919.)

D30. COMPOSITION SEMINAR. Practice of various forms of creative work for a limited number of advanced students.

Students must obtain the written consent of the teacher prior to registration.

Junior and Senior years, second semester. 3 hours.
Professor Frampton.

(In 1918-1919 given to those entering in January, receiving semester hour credits.)

B31. ARGUMENTATION. A study of the elements of argumentation, the analysis of propositions and evidence and drawing of briefs. Practice debates.

Sophomore year, first semester. 3 hours. IV.

Assistant Professor Burgess.

(In 1918-1919 given in the second and third quarters as B31a and 1b, receiving 2 semester hour credits each.)

B32. PUBLIC ADDRESS. A study of the forms of public address. The ends of speech such as clearness, action, and belief are taken up to determine selection of material and method of presentation. The aim is to give the student reasonable control of himself before an audience while effectively presenting clear and convincing thought. Lectures. Frequent speaking before the class.

Prerequisite: English A35.

Freshman and Sophomore years, second semester. 3 hours. III.

Assistant Professor Burgess.

(In 1918-1919 given also in the first quarter, receiving 2 semester hour credits.)

C33. ADVANCED ARGUMENTATION. A study of the principles of argumentation, the tests of evidence, briefing and the structure of the forensic. Of especial value to those looking forward to the law as a profession.

Junior and Senior years, second semester. 3 hours.

Professor Frampton.

(Not given in 1918-1919.)

C34. PRACTICAL PUBLIC SPEAKING. The extempore method is used to train in the rapid formulation of thought and its attractive and effective presentation. Current topics and questions of general interest are assigned in advance as

material for the class discussion, but the choice of language is left largely to the moment of speaking. Other topics assigned at the time of speaking.

Prerequisite: English B32.

Junior and Senior years, second semester. 3 hours.

(Not given in 1918-1919.)

C41. ANGLO-SAXON. A study of Anglo-Saxon grammar and the selections in Bright's "Reader."

Required of students whose major is English.

Junior and Senior years, first semesters. 3 hours. IV.

Professor Frampton.

D42. BEOWULF. A study of the text of Beowulf and Anglo-Saxon versification. Lectures.

Required of those whose major is English Language. Prerequisite: English C41.

Junior and Senior years, second semester. 3 hours. IV.

Professor Frampton.

D44. CHAUCER. A linguistic and literary study of Chaucer. Lectures. Thesis.

It is desirable, though not necessary, that those who elect this course shall have had English C41 and English B6. Given in alternate years. Required of those whose major is English Language.

Junior and Senior years, second semester. 3 hours.

Professor Frampton.

(Not given in 1918-1919.)

ENGLISH LITERATURE

Students who make English Literature their Major subject are required to take from the Department of English Language courses C41 and D42, and from the Department of English Literature courses B3, C7 or C8, two courses from C9, C10, C19, and D20, and two

courses from D5, D6, D15, and D16. They should consult the head of the department regarding their choice of courses and other work. The requirements for the major in English Language are given under that department.

Admittance to A2a and B5a permitted in December and in January in 1918-1919, and less than the normal year's work will be accepted for the proportional credit.

A1a, A1b. NINETEENTH CENTURY ENGLISH AND AMERICAN LITERATURE. Characteristic literary forms and writers of the century. Special attention to those prose productions appearing in other departments, as history, oratory, and argument. Intensive study of selected masterpieces.

Freshman year, both semesters. 3 hours each.

Professor Stearns.

(Not given in 1918-1919.)

A2a, A2b. HISTORICAL SURVEY OF ENGLISH LITERATURE. An introduction to the study of English literature. The course seeks to outline the chief literary tendencies, to characterize the outstanding personalities, to trace the development of the important literary types, to define critical terms, and in general to acquaint the beginner with the fundamentals of literary study and appreciation. The student will be asked to own and read a minimum number of complete masterpieces.

Recommended to students who have not had a high school course in the history of English literature and who do not plan to major in English.

Freshman year, both semesters. 3 hours each. IV.

Assistant Professor Ament.

B3a, B3b. DEVELOPMENT OF ENGLISH LITERATURE. A careful study of the historical and literary evolution of English literature from its beginning to the middle of the eighteenth century. Lectures, class discussions, and individual papers.

A working knowledge of English history is assumed.

Prerequisite: English A1 or equivalent.

Sophomore year, both semesters. 3 hours. IV.

Professor Spalding.

(In 1918-1919 given for two quarters, receiving 2 semester credits each.)

B4. SHAKESPEARE. A rapid reading course.

Sophomore year, second semester. 3 hours. IV.

Professor Spalding.

(In 1918-1919 given the third quarter, receiving 2 semester credits.)

B5a, B5b. NINETEENTH CENTURY LITERATURE. An advanced course than A1 and in Freshman year open only to those who have had a course in History of English Literature.

Sophomore year, both semesters. 3 hours each. VI.

Assistant Professor Ament and Professor Stearns.

B6. MEDIEVAL LITERATURE. A course in comparative literature in translation with special attention to the relation between England and the Continent.

Recommended to those who major in English Language, as preparation for English D44. Open to those who have a knowledge of English history.

Sophomore year, first semester. 3 hours.

Professor Frampton.

(Not given in 1918-1919.)

B13a, B13b. GREEK LITERATURE AND LIFE.

The same as Greek B13. In exceptional cases this course may be substituted for B3 and B4.

Sophomore and Junior years, both semesters. 3 hours each. VI. Professor Norton.

C7. THE ENGLISH ESSAY. In the general field of the essay this course seeks to trace the development of prose style, the appearance of minor prose types, the intellectual tendencies, and the influence of the essay in thought and form in other fields.

Junior and Senior years, first semester. 3 hours. II. Assistant Professor Ament.

(In 1918-1919 given in the first quarter, receiving 2 semester hour credits.)

C8. THE ENGLISH NOVEL. This course follows the historical development of the English novel in technique and content, with constant reference to European influences. An attempt is made in the courses in Essay, Novel and modern drama to trace the main tendencies from the beginning to the present day.

Junior and Senior years, second semester. 3 hours. II. Assistant Professor Ament.

(In 1918-1919 given in the second quarter, receiving 2 semester hour credits.)

C9. ENGLISH POETRY OF THE SEVENTEENTH AND EIGHTEENTH CENTURIES; POETICS. Study of the scientific and artistic structure of English verse. General survey of the period. Intensive study of Milton or Pope.

Junior and Senior years, alternate years, first semester. 3 hours. Professor Spalding.

(Not given in 1918-1919.)

C10. ENGLISH POETRY OF ROMANTIC PERIOD. Comparative study of contributions of poetry of nature and so. Special study of Wordsworth, and other selected writers of this period.

Junior and Senior years, alternate years, second semester. 3 hours.

Professor Spalding.

(Not given in 1918-1919.)

C19. ENGLISH POETRY OF VICTORIAN AGE. Poetic trend and achievements of the century. Special study of Browning or Tennyson.

Junior and Senior years, alternate years, first semester. 3 hours.

Professor Spalding.

(In 1918-1919 given for two quarters, receiving 4 semester credits.)

D20. PRESENT-DAY ENGLISH POETRY. Seminar in study of recent poets most sensibly shaping and expressing contemporary temporary poetical philosophy and usage.

Open to students who have taken the equivalent of two courses in poetry and have the written consent of the instructor.

Junior and Senior years, alternate years, second semester. 3 hours.

Professor Spalding.

(In 1918-1919 given in the first quarter, receiving 2 semester credits.)

D5. SHAKESPEARE'S COMEDIES AND EARLY TRAGEDIES. Special attention to Shakespeare's relations to the dramatic influences of his period. Reading of all comedies. Study of two selected plays representative of his early material and methods.

Junior and Senior years, first semester. 3 hours.

Professor Spalding.

(Not given in 1918-1919.)

5. SHAKESPEARE'S LATER TRAGEDIES AND ROMANCES. Critical and interpretative study of representative dramas in each group. Individual theses upon phases of Shakespeare's mature genius and dramatic art.

Junior and Senior years, second semester. 3 hours.

Professor Spalding.

(Not given in 1918-1919.)

1. HISTORY OF THE ENGLISH DRAMA TO 1642. A study of the development of the English drama from its beginning to the closing of the theatres by the Puritans, with special reference to Shakespeare's contemporaries. This course, with English D12, offers a continuous survey of the English drama from the generic trope to contemporary plays.

Supplementary to English D5 and D6.

Junior and Senior years, first semester. 3 hours. XI.

Professor Frampton.

(Not given in 1918-1919.)

9a, D19b. SEMINAR IN LITERATURE.

Junior and Senior years, second and third quarters. 2 semester credits each. A.

Professor Spalding.

2. ENGLISH DRAMA FROM 1660 TO THE PRESENT. A continuation of English D11. Special attention is paid to Continental influences. During the second half of the semester the Continental drama will be studied.

Junior and Senior years, second semester. 3 hours.

Assistant Professor Ament.

1918-1919 given in the third quarter, receiving 2 semester hour

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D15. SHAKESPEARE'S ENGLISH CHRONICLE AND GREEK AND LATIN PLAYS. Consideration of historical material and its relation to Elizabethan drama.

Alternates with English D5.

Junior and Senior years, first semester. 3 hours.

Professor Spalding.

(Not given in 1918-1919.)

D16. SHAKESPEARE'S REPRESENTATIVE DRAMAS. Senior course in Shakespearean criticism, editing and stage presentation.

Alternates with English D6. Prerequisite: English D5 or D6.

Senior year, second semester. 3 hours.

Professor Spalding.

(Not given in 1918-1919.)

D17a, D17b. SHAKESPEARE. An intensive study of selected plays.

Junior and Senior years, first and second quarters, 2 semester hour credits each. III.

Professor Spalding.

D18. SHAKESPEARE SURVEY. Review of plays, dramatic development.

Junior and Senior years, third quarter, 2 semester hour credits.

Professor Spalding.

FRENCH

(See Romance Languages.)

GEOLOGY

B1a, B1b. GENERAL GEOLOGY. Dynamic and structural geology. Classroom, two hours a week; laboratory, or field work, one hour a week.

Sophomore and Junior years, both semesters. 3 hours each. C I; laboratory, A.

Mr. Woodford.

13. PALEONTOLOGY.

Prerequisite: Botany and Zoology.

Junior and Senior years; first semester. 3 hours.

Prof. Woodford.

(Not given in 1918-1919.)

15. MINERALOGY. (See Chemistry C15.)

14. SOIL ANALYSIS. (See Chemistry C14.)

GERMAN

1a, A1b. ELEMENTARY COURSE. Intended especially for Freshmen who offer no modern language. By the constant use of the language in the class room the student is acculturated from the outset to think in German. Thorough training in grammar and composition throughout the year; memorizing of poetic and also prose selections; reading of a considerable body of simpler stories and poems.

Freshman year, both semesters. 3 hours each. III.

Professor Bissell.

In 1918-1919 given in second and third quarters, receiving 2 semester hour credits each.)

2a, A2b. INTERMEDIATE COURSE. Grammar, composition, reading of prose and poetry, memorizing of the latter. Primarily for those entering with only one unit of recommended German. May be required of others who show special need of the kind of drill given.

Freshman and Sophomore years, both semesters. 3 hours each.

Associate Professor Churchill.

(Not given in 1918-1919.)

3a, B3b. PROSE NARRATIVE AND DRAMA. Reading of the advanced short stories or a novel, and a drama. Grammatical analysis, short essays in German on assigned topics, reading, discussion of text in German, the student being

expected to grow in ability to use the language freely. Reading of selected ballads and other poems of Schiller, Lied der Glocke, and Maria Stuart.

Prerequisite: German A1, or two years of elementary German. Freshman and Sophomore years, both semesters. 3 hours. I, VI.

Professor Bissell.

B4a, B4b. GERMAN COMPOSITION. Simple prose narrative and conversation. Review of fundamentals of grammar.

May be required of those deficient in German.

Freshman and Sophomore years, both semesters. 1 hour each. Associate Professor Churchill.

WB5. MILITARY GERMAN.

Prerequisite: German A1 or equivalent.

First quarter. 2 semester hour credits. VI.

Professor Bissell.

B6a, B6b. GERMAN COMPOSITION. Advanced narrative prose.

For students of good standing.

Freshman and Sophomore years, both semesters. 1 hour each. Associate Professor Churchill.

WB7. MILITARY GERMAN.

Prerequisite: A1 or equivalent.

First quarter. 2/3 semester hour credits. F, XI.

Professor Bissell.

C9a, C9b. GERMAN NOVEL OF THE NINETEENTH CENTURY. Lectures on the development of the German Novel with readings from works of Haupt, Eichendorff, Frey, Auerbach, Ludwig, Spielhagen, Keller, Storm, Frenssen.

Prerequisite: German B3, or equivalent.

Sophomore and Junior years, first semester. 3 hours.

Professor Bissell.

(Not given in 1918-1919.)

C10a, C10b. GERMAN COMPOSITION AND CONVERSATION. Required of those making German their major. Prerequisites: German B3, or equivalent, and German B6.

Sophomore and Junior years, both semesters. 1 hour each. A. Professor Bissell.

C19. ADVANCED GERMAN PROSE. Reading of carefully selected addresses by Emperor William, Carl Schurz, von Bismarck and other men of note, and other selections which offer a rich and varied vocabulary in the general fields of political science, history, criticism and philosophy and literature.

Prerequisite: German B3, or equivalent.

Sophomore and Junior years, first semester. 3 hours.

Assistant Professor Matlock.

(Not given in 1918-1919.)

C20. ADVANCED GERMAN PROSE. A continuation of German C19.

Prerequisite: German C19.

Sophomore and Junior years, second semester. 3 hours.

Assistant Professor Matlock.

(Not given in 1918-1919.)

C21. SCIENTIFIC GERMAN. Based on Hodge's Course in German and Brandt and Day's Reader. Assignments from the works of scientific writers.

Intended primarily for those planning to do graduate work leading to the degree of Doctor of Philosophy. Prerequisite: German C9, or equivalent.

Junior and Senior years, second semester. 3 hours. A.

Professor Bissell.

D13. LESSING. Lectures on Lessing's life, works influence. Reading of his principal dramas and portion Laocoon and other prose works.

Junior and Senior years, first semesters. 3 hours. VII.

Professor Bissell.

(In 1918-1919 given the first quarter, receiving 2 semester credits.)

D14. GOETHE. Lectures on Goethe's life, works place in literature, relation to Schiller. Reading of Part I, and at least two other works.

Prerequisite: German D13.

Junior and Senior years, second semester. 3 hours. VII.

Professor Bissell.

D15. OUTLINE COURSE IN THE HISTORY OF GERMAN LITERATURE AND LANGUAGE TO THE AGE OF LESSING. Lectures supplemented by assigned readings from the great medieval epics.

Prerequisite: German C9, or equivalent.

Junior and Senior years, first semester. 3 hours.

Professor Bissell and Assistant Professor Matlock.

(Not given in 1918-1919.)

D16. CONTINUATION OF D15 FROM LESSING TO THE DEATH OF GOETHE. Reading of representative works of Lessing, Schiller and Goethe.

Prerequisite: German D15.

Junior and Senior years, second semester. 3 hours.

Professor Bissell and Assistant Professor Matlock.

(Not given in 1918-1919.)

D12. GERMAN COMPOSITION. Advanced course.

Required of all who desire the recommendation of the Department as teachers. Prerequisites: Two years of college German, including German C10.

Junior and Senior years, first semester. 3 hours.

Professor Bissell.

(Not given in 1918-1919.)

17. MODERN DRAMA. Lectures, assigned readings, papers.

Junior and Senior years, first semester. 3 hours.

Professor Bissell.

(Not given in 1918-1919.)

18. MODERN FICTION. A study of the fiction of the twenty-five years. Lectures, assigned readings, papers.

Junior and Senior years, second semester. 3 hours.

Professor Bissell.

(Not given in 1918-1919.)

GREEK

and B2. ELEMENTARY GREEK. A course designed for those wishing to begin the study of the language after entering college. The use of the "First Year of Greek," by J. T. Allen, insures a course well worth while, even if the subject is carried no further, and also makes it possible for those who complete the course with high grade to elect B2 and B3 in their second year.

Freshman and Sophomore years, both semesters. 3 hours each.

Professor Norton.

B2b. GREEK COMPOSITION.

Required of those who make Greek their major.

Freshman and Sophomore years, both semesters. 1 hour each.

Professor Norton.

(Not given in 1918-1919.)

LYSIAS. Selected orations (Morgan), with review of grammar and study of Greek life.

Freshman and Sophomore years, first semester. 3 hours.

Professor Norton.

(Not given in 1918-1919.)

B4. PLATO. Apology and Crito with selections Phaedo (Kitchel). Homer, Odyssey, three or four books of grammar.

Freshman and Sophomore years, second semester. 3 hours.
Assistant Professor Robbins.

C5. AESCHYLUS AND SOPHOCLES. Prometheus (Hart) and Oedipus the King (White). Translations of other plays read in class; study of Haigh's Greek Theater; essays.

Sophomore year, first semester. 3 hours.

Assistant Professor Robbins.

(Not given in 1918-1919.)

C6. DEMOSTHENES. Oration on the Crown (Phillips); outline of Greek literature; sight reading.

Sophomore year, second semester. 3 hours. VIII.

Professor Norton.

C7. HELLENISTIC GREEK. One of the Gospels and one of the Pauline Epistles; informal lectures on ancient manuscripts and the elements of textual criticism.

Alternates with Greek D9.

Junior and Senior years, first semester. 3 hours.

Professor Norton.

(Not given in 1918-1919.)

D8. HOMER. Rapid reading of a number of books of the Iliad or Odyssey; the Homeric question.

Alternates with Greek D10.

Junior and Senior years, first semester. 3 hours. VIII.

Professor Norton.

D9. PLATO, PHAEDO AND PROTAGORAS. Outline of Greek Philosophy.

Alternates with Greek C7.

Junior and Senior years, first semester. 3 hours.

Professor Norton.

(Not given in 1918-1919.)

10. THUCYDIDES. BOOKS VI AND VII.

alternates with Greek D8.

Junior and Senior years, second semester. 3 hours.

Professor Norton.

(Not given in 1918-1919.)

11a, D11b. PROSE COMPOSITION AND SIGHT READING.

Required of all making Greek a major.

Junior and Senior years, both semesters. 1 hour each.

(Not given in 1918-1919.)

13a, B13b. GREEK LITERATURE AND LIFE. This course is given to those who have no knowledge of the Greek language. It is intended to give, through lectures and translations, some appreciation of the Greek genius and spirit, and a knowledge of the form and content of Greek literature. Though ordinarily a year course, it may, by special arrangement with the instructor, be taken for either semester.

sophomore and Junior years, both semesters. 3 hours each. VI.
Professor Norton.

HISTORY

Those seeking a departmental major are required to take thirty hours of history, including History D30, or such equivalent as the department may prescribe.

1a, A1b. GENERAL EUROPEAN HISTORY. An introductory outline course in which intensive study of selected periods is made. Intended to bring out modern historical methods.

sophomore year, both semesters. 3 hours each. I.

Associate Professor Westergaard and Assistant Professor Thom-

B2a, B2b. EARLY EUROPEAN HISTORY. From the fall of the Roman Empire in the West to the Congress of Vienna (1476-1648). Lectures and discussions, with emphasis on the use of sources and methods of research.

Sophomore year, both semesters. 3 hours each. II.
Associate Professor Westergaard.

B3. ANCIENT CLASSICAL HISTORY. A history of recent archeological investigation in the general field of ancient history, particularly of Greece.

Sophomore and Junior years, first semester. 3 hours.
Professor Stearns.
(Not given in 1918-1919.)

B4. ANCIENT CLASSICAL HISTORY. (Continued.) Special attention is given to Rome.

Sophomore and Junior years, second semester. 3 hours.
Professor Stearns.
(Not given in 1918-1919.)

B7. ENGLISH HISTORY TO 1783. An introductory survey, in which emphasis is laid upon historical method and use of source problems and systematic theme writing.

Sophomore and Junior years, first semester. 3 hours.
Associate Professor Westergaard.
(Not given in 1918-1919.)

B8. THE BRITISH EMPIRE. Its rise and development. The rise of modern democracy in England and growth of the British colonial empire; dependencies and self-governing colonies; federation and liberalism in the Empire.

Sophomore and Junior years, second semester. 3 hours.
Associate Professor Westergaard.
(Not given in 1918-1919.)

B25a, B25b. CONTEMPORARY PROBLEMS. A combined reading and lecture course with special reference to present-day world questions, open to all classes.

Sophomore year, both semesters. 2 hours each. W, F, XI.

Mr. Marriott.

B21. ANCIENT ORIENTAL HISTORY. Babylonia, Assyria, Egypt.

(See Biblical History and Literature B21.)

B22. ANCIENT ORIENTAL HISTORY. Persia, Palestine.

(See Biblical History and Literature B22.)

C13. MODERN EUROPEAN HISTORY. From the Congress of Westphalia to the Congress of Vienna (1648-1875). Rise of the Europe of sovereign states from divine right monarchy to democratic revolution and military despotism.

Junior year, first semester. 3 hours. VII.

Associate Professor Westergaard.

(In 1918-1919 History C13 and D14 are divided into three courses, one quarter each and designated as C13, C14, D15.)

D14. MODERN EUROPEAN HISTORY. From the Congress of Vienna to the outbreak of the World War (1815-1914).

Junior and Senior years, second semester. 3 hours. VII.

Associate Professor Westergaard.

D27a, D27b. AMERICAN HISTORY. From the Peace of Paris (1763) to the present time. Lectures, with oral and written exercises, on the Westward movement of the American people, and the development of our social, economic and political institutions.

Junior and Senior years, first and second semesters. 3 hours each.

Associate Professor Westergaard.

D29. EARLY AMERICAN CARTOGRAPHY AND EXPLORATION. Includes a careful study of interesting early maps and works of travel and exploration to be found in the Map Collection.

Prerequisite: Two years of college history.

Junior and Senior years, second semester. 2 hours.

Mr. Marriott.

(Not given in 1918-1919.)

D30. PRO-SEMINAR IN HISTORY.

Required of those seeking a departmental major in History open to other advanced students.

Senior year, first semester. 2 hours.

Associate Professor Westergaard.

(Not given in 1918-1919.)

For classes in American Diplomacy, Colonial Government, Constitutional History, History of Religion and History of Education see the Departments of Law, Constitutional History, Biblical History and Literature and Psychology.

CONSTITUTIONAL HISTORY

B19. AMERICAN COLONIAL GOVERNMENT. This course is a study with particular reference to the government and administration of the individual American colonies and settlements. The ground covered is that of the French settlements, the Puritan colonies, Virginia, Maryland, and the Carolinas, the Middle colonies, the Dutch and Quaker colonies, Spanish and French settlements, and the Indians.

Intended to prepare students for the later courses in American Constitutional History and Comparative Constitutional History.

Sophomore and Junior years, first semester. 3 hours. II.

Professor Neely.

(In 1918-1919 given the first and second quarters, receiving semester hour credits each.)

D9a, D9b. COMPARATIVE CONSTITUTIONAL HISTORY. With the English Constitution as a basis, comparison of the institutions of European and American States is made. This gives a fair knowledge of present-day governments. Junior and Senior years, both semesters. 3 hours. IV. Professor Neely.

D11a, D11b. AMERICAN CONSTITUTIONAL HISTORY. In this course the principles of constitutional law are taught, constitutional questions discussed and constitutional cases examined.

Prerequisite: A course in American History.
Junior and Senior years, both semesters. 3 hours each.
First semester, Professor Neely.
(Not given in 1918-1919.)

ITALIAN

(*See Romance Languages.*)

LATIN

A1a, A1b. ELEMENTARY LATIN. A course intended for those desiring to begin the study of the language after entering college. Grammar, composition, and readings from Caesar's Gallic War. Freshman year, both semesters. 3 hours each. II. Assistant Professor Robbins.

A2a, A2b. VERGIL AND CICERO. Selections from the *Aeneid* and the Orations of Cicero. Freshman and Sophomore years, both semesters. 3 hours each. I. Professor Colcord.

B3. CICERO AND LIVY. Cicero; (Kelsey) *De Senectute* and *De Amicitia*; Livy; (Westcott) Books XXI and XXII, selections; written translations, collateral reading, sight reading. Freshman year, first semester. 3 hours. VI. Professor Colcord.

B5. HORACE. (Bennett) Odes, Epodes, Carmen S. lare; Horatian meters; written translations, collateral ing, sight reading.

Freshman year, second semester. 3 hours. VI.
Professor Colcord.

B4a, B4b. LATIN COMPOSITION.

Required of all making Latin their major.

Freshman year, both semesters. 1 hour each. F, IX.
Professor Colcord.

C6. PLINY. (Westcott) Letters, Tacitus, (Guden Agricola and Germania. Collateral readings, history Roman satire.

Sophomore year, first semester. 3 hours. VIII.
Professor Colcord.

C7. PLAUTUS. Captivi, Trinummus, Terence Adelph Andria. Collateral readings, study of early Roman com and fragments of early Latin.

Sophomore year, second semester. 3 hours. VIII.
Professor Colcord.

C8a, C8b. LATIN COMPOSITION. Connected narrative Required of all making Latin their major. Prerequisite: Latin Sophomore year, both semesters. 1 hour each. A.
Professor Colcord.

D9. CICERO. Letters, Tusculan Disputations. Roman satire; Persius, Martial and Juvenal, selections. History Roman satire.

Junior and Senior years, first semester. 3 hours. V.
Professor Colcord.

D10. CATULLUS; LUCRETIUS; TIBULLUS; PROPERTI OVID; LUCAN (Crowell.) Selections. Topics in outline Roman literature.

Junior and Senior years, second semester. 3 hours. V.
Professor Colcord.

D11. TACITUS. Histories and Annals.

Junior and Senior years, first semester. 3 hours.

Professor Colcord.

(Not given in 1918-1919.)

D12. VERGIL. Bucolics and Aeneid, Books VII-XII.

Vid. Selections. Christian and Latin Hymns.

Junior and Senior years, second semester. 3 hours.

Professor Colcord.

(Not given in 1918-1919.)

D14a, D14b. LATIN COMPOSITION. Original papers.

Required of those making Latin their major: Prerequisite: Latin C8.

Junior and Senior years, both semesters. 1 hour each. A.

Professor Colcord.

D15a, D15b. SPECIAL LATIN.

Adapted to the needs of the individual student. Required of those seeking a departmental major in Latin.

Senior year, both semesters. 3 hours each. IV.

Professor Colcord.

LAW

B1a, B1b. ELEMENTARY LAW. This course treats of the sources of law, common law, equity. A text book is used, also reported cases, combining the "text book method" with the "case system" of teaching law.

Junior and Senior years, both semesters. 3 hours each. I.

Professor Neely.

C3. PLEADING.

Junior and Senior years, first semester. 3 hours. VI.

Professor Neely.

D4. EVIDENCE.

Junior and Senior years, second semester. 3 hours. VI.

Professor Neely.

C17. AMERICAN DIPLOMACY. A study is made in course of the history of the foreign relations of the American Colonies under the Continental Congress, and an examination of the important treaties of the United States. Establishment, organization and history of the Department of State.

Junior and Senior years, first semester. 3 hours. IX.

Professor Neely.

(In 1918-1919 given first quarter, receiving 2 semester credits.)

D18. INTERNATIONAL LAW. In this course a study is made of the principles and rules of law that have been adopted for the conduct of international affairs by consent of nations.

Junior and Senior years, second semester. 3 hours. IX.

Professor Neely.

(In 1918-1919 given second and third quarters, receiving 2 semester hour credits each.)

MATHEMATICS

The courses in Mathematics designated A1, A2, B3, B4, A5, B7 are intended primarily for Freshmen. Students who enter with credit for three and a half or four units of commended work in Mathematics, including solid geometry and trigonometry, may take Mathematics B6, B7 or B13. Mathematics B7 is required of students in Engineering. Students who wish to take further work in Mathematics, but who have not sufficient preparation for the B courses, may take Mathematics A1 and A2, or B3a and B3b, or A4 and A5, according to their preparation and need. Mathematics A5a and A5b are intended primarily for those who do not expect to take further work in the subject.

A1. SOLID GEOMETRY. The geometry of space with original exercises and problems.

Freshman year, second semester. 3 hours. IV.

Professor Stearns.

A2. PLANE TRIGONOMETRY. Essential principles and applications to problems in surveying.

Freshman year, first semester. 3 hours. III and IV. Second semester. V.

Professor Stearns and Associate Professor Russell.

B3a, B3b. ALGEBRA. Review of fundamental notions and operations, quadratic equations, ratio, proportion and variation, commensurable, incommensurable, and imaginary numbers, progressions, permutations and combinations, binomial theorem, series, undetermined coefficients, logarithms, determinants, theory of equations.

Freshman year, both semesters. 3 hours each. V.

Associate Professor Russell.

A5a, A5b. ELEMENTARY ANALYSIS. A theoretical and historical study of some of the most interesting principles of mathematical analysis.

Freshman year, two divisions, both semesters. 3 hours each. III, V. Assistant Professor Berry and Mr. Wingate.

A4. ALGEBRA. A semester course in second year algebra, designed for those who have studied algebra only a year.

Freshman year, two divisions, first semester. 3 hours. IV, V.

Professor Stearns and Mr. Wingate.

In 1918-1919 section IV given in first quarter only, receiving 2 semester hour credits.)

B6. ADVANCED AND SPHERICAL TRIGONOMETRY. A general course, with applications in geodesy and astronomy.

Prerequisite: Plane trigonometry.

Sophomore and Junior years, first semester. 3 hours. IX.

Associate Professor Russell.

B7a, B7b. ANALYTIC GEOMETRY AND CALCULUS. course designed especially for students of physics and engineering.

Freshman and Sophomore years, both semesters. 3 hours each.
Assistant Professor Belcher.
(Not given in 1918-1919.)

B13a, B13b. ANALYTIC GEOMETRY AND CALCULUS. elementary course in the principles of co-ordinate geometry and the introduction to the differential calculus.

Designed to follow Mathematics A1 and A2, B3 or A4 and A2.
Sophomore year, both semesters. 3 hours each. VI.
Associate Professor Russell.

C8a, C8b. ADVANCED ANALYTIC GEOMETRY AND CALCULUS. A continuation of B7a, B7b. Fundamental processes in integration with applications to analytic geometry and mechanics; functions of several variables and space coordinates; partial differentiation; differential equations.

Sophomore and Junior years, both semesters. 3 hours each.
Assistant Professor Belcher.
(Not given in 1918-1919.)

C15a, C15b. DIFFERENTIAL AND INTEGRAL CALCULUS. continuation of Mathematics B13a, B13b.

Junior year, both semesters. 3 hours. VII.
Associate Professor Russell.

D19. THEORY OF EQUATIONS. Analysis and solution of higher algebraic equations; review of determinants with elementary reductions and processes, elimination and linear transformations.

Junior and Senior years, first semester. 3 hours. IV.
Associate Professor Russell.

20. DIFFERENTIAL EQUATIONS. A general course in theory and solution of differential equations.

Junior and Senior years, second semester. 3 hours. IV.

Associate Professor Russell.

21a, D21b. HIGHER ANALYSIS. This course is an extension of the more elementary analysis developed in Mathematics B7 and C8. Its content differs from year to year. The purpose is by the study of the principles and methods of some of the great modern mathematicians like Cauchy, Weierstrass, Clebsch and Gauss in certain subjects like the theory of functions or the general theory of algebraic curves, to furnish an introduction to the realm of higher mathematics and to develop still further independence and power of sound mathematical reasoning.

Junior and Senior years, both semesters. 3 hours each.

Professor Brackett.

(Not given in 1918-1919.)

WC25a, WC25b. RANGE FINDING AND PROJECTILES.

Junior and Senior years, both semesters. 3 hours each. IV.

Professor Brackett.

26a, D26b. ANALYTIC MECHANICS. Mathematical treatment of important principles in mechanics; applications to numerous problems; discussion of general application of analytic reasoning to other physical problems.

Junior and Senior years, both semesters. 3 hours each.

Professor Brackett.

(Not given in 1918-1919.)

27a, D27b. PROJECTIVE GEOMETRY. A deductive study of general projective geometry with attention to the foundations of geometry.

Junior and Senior years, both semesters. 3 hours each.

Professor Brackett.

(Not given in 1918-1919.)

MILITARY TRAINING

A1a, A1b. DRILL AND TACTICS.

Freshman year, both semesters. 1 hour each. M, 2:30-4:30;
11:15.

Professor Vogdes and Assistant.

WA1a. DRILL AND TACTICS. For members of the Students' Army Training Corps. Eleven hours per week.

Freshman year, first quarter, 2 semester hour credits.

Major Vogdes and Lieutenants Davis and Moran.

B3a, B3b. DRILL AND TACTICS.

Sophomore year, both semesters. 1 hour each. M, 2:30-4:
Th, 11:15.

Professor Vogdes and Assistants.

WB3a. DRILL AND TACTICS. For members of the Students' Army Training Corps.

Sophomore, Junior and Senior years, first quarter, 2 semester hour credits.

Major Vogdes and Lieutenants Davis and Moran.

C5a, C5b. DRILL AND TACTICS.

Prerequisite: Military B3.

Junior and Senior years, both semesters. 1 hour each. A.
Major Vogdes.

WB11. MILITARY GEOLOGY.

All years, first quarter. 2 semester hour credits. I.
Mr. Woodford.

WB12. EUROPEAN GEOGRAPHY.

All years, first quarter. 1 or 2 semester hour credits. II.
Professor Bissell.

WB13a, WB13b, WB13c. ISSUES OF THE WAR.

All years, three quarters. 2 semester hour credits each. First quarter, ten sections, II, III, IV, V, VI, VII, IX. Assistant Professor Robbins, Dr. Davidson, Dr. Griswold and lecturers. Second and third quarters, III, V, VI. Assistant Professor Robbins and lecturers.

WB14. SANITATION AND HYGIENE.

All years, first quarter. 2 semester hour credits. I, II, VII.
Assistant Professor Schott.

WB15. MILITARY LAW AND PRACTICE.

All years, first quarter. 2 semester hour credits. I, VI.
Professor Sumner, Assistant Professor Burgess.

MUSIC

HISTORY AND THEORY OF MUSIC.

Courses in the History and Theory of Music are granted credit on the same basis as other college studies, and proficient students may major in either theoretical or applied music under conditions arranged in consultation with the head of the department.

A1a, A1b. ELEMENTARY MUSIC AND EAR TRAINING. A course dealing with the rudiments of music, including notions, rhythm, intervals, scales and definitions of terms. Extended work in ear-training, aiming to teach discriminative listening. Elementary work in Harmony is undertaken in the second semester. A text is used.

Three recitations to count as two hours.

Freshman and Sophomore years, two divisions, both semesters. 3 hours each. II, XIII.

Professor Lyman and Assistant Professor Allen.

B3a, B3b. MUSICAL HISTORY AND APPRECIATION. Lectures and recitations are given on the development of music from its earliest stages. The history of church music, of opera, and oratorio; biographical sketches of famous composers, with description of their principal works. Recitals, aided in appreciation, are given frequently. A text-book is used.

Sophomore year, both semesters. 3 hours each. XI.

Assistant Professor Allen.

B5a, B5b. HARMONY. A study of intervals, scale, chord construction and their relation. An abundance of excerpts are examined. Especial emphasis is laid upon harmonization of melodies, as well as practical application at the key-board of the principles involved. Creative work is encouraged from the beginning. The text by Carolyn Alchin is used.

Prerequisite: Music A1, and an elementary knowledge of pianoforte.

Sophomore and Junior years, both semesters. 3 hours each.
Assistant Professor Allen.

C6a, C6b. APPLIED HARMONY. This course applies at keyboard the principles taught in Music B5.

Prerequisite: Music B5.

Junior year, both semesters. 2 hours each. V.
Assistant Professor Allen.

C7a, C7b. COMPOSITION I. A study of Simple Counterpoint of all species in two, three and four voices. The aim is to develop technique in smooth voice leading. Creative work in the simpler forms of Free Composition is added in the second semester.

Prerequisite: Music B5.

Junior and Senior years, both semesters. 3 hours each.
Assistant Professor Allen.
(Not given in 1918-1919.)

D8a, D8b. COMPOSITION II. Original work leading to the Sonata form constitutes the basis of this course.

Prerequisite: Music C7.

Junior and Senior years, both semesters. 3 hours each. A.
Assistant Professor Allen.

C12. MUSICAL APPRECIATION. Designed to enable students to understand and enjoy the different forms of music composition. Lectures are supplemented by outside reading and abundant musical illustrations.

3 hours.

(Not given in 1918-1919.)

C13a, C13b. ORCHESTRATION. A study of orchestral instruments, their possibilities and limitations, arranging of compositions for small orchestra, the theory and practice of conducting.

Designed especially to meet the needs of a student desiring the Certificate.

Junior and Senior years, both semesters. 3 hours each. XIII.

Assistant Professor Allen.

APPLIED MUSIC

Any student may take work in Applied Music, but is enrolled for credit only upon the written recommendation of the Chairman of the Examining Committee and the Head of the Department concerned, and upon the subsequent favorable action of the Classification Committee. This recommendation and the action of the committee are based upon the degree of ability shown in proficiency tests. (See Music Bulletin.) Work in Applied Music to receive credit must be carried with a minimum of two half-hour lessons weekly and must be accompanied or preceded by the theoretical courses A1 and A2. Under these conditions the applied work is rated as two hours each semester. Not more than ten such hours may be counted toward the degree.

Voice—Professor Lyman and Miss Pasmore.

Organ—Assistant Professor Hartley.

Piano—Assistant Professor Hartley, Miss West and Mrs. Russell.

Stringed Instruments and Ensemble—Assistant Professor Zoellner.

PHILOSOPHY

In keeping with the requirements of those who plan to be graduate students of Philosophy, certain courses are offered each semester, in which the spirit of independent research is encouraged, and methods of specialized study are within certain limits employed. Except by consent of the department, registration in these courses is limited to students whose major is Philosophy.

Prerequisites: Nine hours of Philosophy and Psychology, including C25 and C26.

B21. LOGIC. The course is designed to be an introduction to the essentials of reasoning. Stress is laid upon exercises in logical construction, the detection of fallacies, upon conception and classification. Induction and deduction in their relations, as employed in scientific research. Recitations, lectures and written assignments.

Sophomore and Junior years, first semester. 3 hours. IV.
Professor Cooley.

B23. THE ELEMENTS OF ETHICS. The origin and development of moral ideas. The relation of these ideas and their development to civilization, with especial reference to their bearing upon the relation of the individual to society. The problems considered are those of goodness, evil, freedom, conscience, the nature of the self, and the super-natural good. Lectures, required readings and theses.

Prerequisite: Psychology B1. Required of all not taking Philosophy C24.

Junior year, either semester. 3 hours. V.
Professor Cooley.

C24. THE PRINCIPLES OF ETHICS. A course designed for more advanced students of philosophy.

May be substituted for Philosophy B23 by those students

like Philosophy their major, and likewise by other students of proved preparation. May also be taken as an elective by students who have completed B23. Lectures and theses.

Junior and Senior years, second semester. 3 hours. III.

Professor Cooley.

C25. ANCIENT AND MEDIEVAL PHILOSOPHY. Lectures, readings of fragments of early Greek philosophers, and selected readings from the writings of Plato and Aristotle. An extended thesis treating of some fundamental problem in ancient philosophy. Text, Rogers' "A Student's History of Philosophy."

Junior and Senior years, first semester. 3 hours. VII.

Professor Cooley.

C26. MODERN PHILOSOPHY. Lectures, and readings from Descartes, Leibniz, Locke, Hume, and Kant. A thesis dealing with some modern philosophical problem is required. Rogers' text. Rand's "Classical Philosophers." Reference made to Royce's "The Spirit of Modern Philosophy," and Calkins' "The Persistent Problems of Philosophy."

Junior and Senior years, second semester. 3 hours. VII.

Professor Cooley.

C27. INTRODUCTION TO PHILOSOPHY. Designed to familiarize the student with the outlines, divisions and methods of procedure in the several branches of philosophical inquiry.

Junior and Senior years, first semester. 3 hours.

Professor Parker.

(Not given in 1918-1919.)

C28. METAPHYSICS. An inquiry for the fundamental conceptions of philosophy.

Junior and Senior years, second semester. 3 hours.

Professor Parker.

(Not given in 1918-1919.)

D29. PHILOSOPHY OF RELIGION. The origin and nature of religion. Its development as a corollary of civilization through stages approaching to the level of revelation and redemption. These stages considered with especial reference to their illustration by the religion of Israel and its culmination in Christianity.

Junior and Senior years, second semester. 3 hours. VI.
Professor Cooley.

D30. CONTEMPORARY PHILOSOPHY. An effort to survey the prominent tendencies in present-day thinking, and to relate them to their proper historical sources.

Junior and Senior years, first semester. 3 hours. VI.
Professor Cooley.

PHYSICAL EDUCATION

A course of Physiology and Hygiene, described under the department of Physiology as A1, Applied Physiology and Hygiene, is required of all. The courses are graded, systematic and progressive. Their purpose is to remedy ordinary physical defects, to develop endurance and co-ordination.

Courses A1 to C8, inclusive, and C31 are for men. Physical measurements are taken at the beginning and end of Freshman and Sophomore years, and are optional for Juniors and Seniors. They are designed primarily to determine vital strength and organic weakness, secondarily to determine muscular strength. The measurements obtained are plotted on anthropometrical tables to determine development and comparison with the average. Any individual who is below normal is given prescribed exercise.

A1a, A1b. ELEMENTARY GYMNASTICS*. Calisthenics, U. S. A. Regulations without arms: dumbbell, wand and Indian club drills; exercise on horizontal bar, parallel bars, s

* The men in athletics are, upon recommendation of the coach, excused from actual participation in gymnastics during the period covered by the particular sport in which they are engaged.

se, long horse, bucks, ladders, etc. The closing minutes of each class period are devoted to the teaching and playing of games. Two class exercises per week.

Freshman year, both semesters. $\frac{1}{2}$ hour each. T, F, at 4:15.

Assistant Professor Schott.

A2a, A2b. SPORTS. Two periods of outdoor exercise a week selected by the student in consultation with the director. Required of Freshmen not taking Military Drill.

Freshman year, both semesters. $\frac{1}{2}$ hour each. A.

Assistant Professor Schott.

B3a, B3b. ADVANCED GYMNASTICS*. This course follows Gymnastics A1 and A2, and takes up more advanced exercises, including mat work, tumbling, advanced apparatus work, and athletic and gymnastic dancing.

Required, Sophomore year, both semesters. $\frac{1}{2}$ hour each. T, F, at 5:15.

Assistant Professor Schott.

B4a, B4b. SPORTS. Two periods of outdoor exercise a week selected by the student in consultation with the director. Required of Sophomores not taking Military Drill.

Sophomore year, both semesters. $\frac{1}{2}$ hour each. A.

Assistant Professor Schott.

C5a, C5b. SPORTS. Two periods of outdoor exercise in games or other exercises to be elected by the student in consultation with the director, with lectures on social hygiene.

Required of those not electing Military Drill.

Junior year, both semesters. $\frac{1}{2}$ hour each. T, F, at 5:00.

Assistant Professors Schott and Nixon.

* The men in athletics are, upon recommendation of the coach, excused from actual participation in gymnastics during the period covered by the particular sport in which they are engaged.

C7a, C7b. SPORTS. Two periods of outdoor exercise in games or walking as in C5, with lectures on hygiene related to heredity and eugenics.

Required of those not electing Military Drill.

Senior year, both semesters. $\frac{1}{2}$ hour each. A.

Assistant Professors Schott and Nixon.

C31a, C31b. THEORY OF ATHLETICS. The various athletic sports, football, basketball, baseball and track athletics are discussed from the standpoint of coaching, training and officiating. Every student is given some practical work in the technique of coaching and officiating. The course is elective, and is especially designed for students who expect to coach high school athletics incidental to their teaching.

Open to Senior men only, both semesters. 2 hours each.

Assistant Professor Schott.

(Not given in 1918-1919.)

The work for women is at once educative and practical in aims, endeavoring not only to correct abnormalities of structure and function, but to prevent their occurrence. Physical and medical examinations are required of all entering students; the physical examination is repeated at the end of the year.

A11a, A11b. GYMNASIUM PRACTICE. Two periods of gymnasium work.

Required, Freshman year. $\frac{1}{2}$ hour each. M, Th, at 3:30, or Th, at 4:30.

Miss Spear and Miss Goodrich.

A12a, A12b. OUTDOOR SPORTS. Two periods of outdoor sports, elected by the student subject to the approval of the director.

Required, Freshman year. $\frac{1}{2}$ hour each.

Miss Spear and Miss Goodrich.

B13a, B13b. GYMNASIUM PRACTICE. A continuation of
1. Two periods, following the general arrangement of
1.

Required, Sophomore year. $\frac{1}{2}$ hour each. M, Th, at 5:15.

Miss Spear and Miss Goodrich.

B14a, B14b. OUTDOOR SPORTS. A continuation of A12.
Two periods following the plan of A12.

Required, Sophomore year. $\frac{1}{2}$ hour each.

Miss Spear and Miss Goodrich.

C15a, C15b. SPORTS. Two periods of outdoor sports
selected by the student, subject to the approval of the director;
from October 1 to June 1.

Junior year. $\frac{1}{2}$ hour each.

Miss Spear and Miss Goodrich.

C17a, C17b. SPORTS. Two periods of outdoor sports
in C15, with lectures on hygiene as related to heredity
and eugenics.

Senior year. $\frac{1}{2}$ hour each.

Miss Spear.

B19. FOLK AND NATIONAL DANCING. One period; from
November 1 to May 1.

Elective for Freshmen and Sophomores. $\frac{1}{2}$ hour.*

Miss Spear.

C21. FOLK AND NATIONAL DANCING. One period; from
November 1 to May 1.

Prerequisite: Physical Education B19, or its equivalent.

Elective for Sophomores, Juniors, and Seniors. $\frac{1}{2}$ hour.*

Miss Spear.

C23. AESTHETIC DANCING. One period; from Novem-
ber 1 to May 1.

Prerequisite: Physical Education C21, or its equivalent.

Elective for Juniors and Seniors. $\frac{1}{2}$ hour.*

Miss Spear.

The half hour credit for these courses does not count toward the 126
credits required for graduation.

C25. GYMNASIUM PRACTICE. One period; from November 1 to May 1.

Prerequisites: Physical Education A11 and B13, or their equivalent.

Elective for Juniors and Seniors. $\frac{1}{2}$ hour.*

Miss Spear.

Forty minutes constitutes a period. B19, C21, C23, C25, or Swimming may be substituted for one period of out-door exercise. Hours and credits given for these courses may not be used in the requirements for graduation.

C33a, C33b. PLAY GROUND METHODS. Theory and philosophy of play. Equipment, construction and management of city and rural play grounds.

Elective, one hour each week. Students taking this course will be required to teach the various playground activities.

Junior and Senior years, both semesters. 2 hours each. A.

Assistant Professor Schott.

Laboratory fee, \$2.50 each.

PHYSICS

A1a, A1b. ELEMENTS OF PHYSICS. This course is designed for those having had no previous work in the subject.

Prerequisites: Elementary Algebra and Plane Geometry. Classroom, three hours a week; laboratory, one hour a week.

Freshman and Sophomore years, both semesters. 4 hours. Classroom, IV; laboratory, T, 1:30-4:30.

Professor Hitchcock.

Laboratory fee, \$4.00 each.

A2a, A2b. GENERAL PHYSICS. A course more advanced than Physics A1a, meeting the physics requirements of

*The half hour credit for these courses does not count toward the 12 credits required for graduation.

courses in medicine, chemistry and civil engineering. It may be successfully pursued without any previous course in the subject.

Prerequisites: Algebra through Quadratics, Plane Geometry and Plane Trigonometry. Class room, three hours a week; laboratory, one hour a week.

Freshman and Sophomore years, both semesters. 4 hours. Class room, III; laboratory, Th, 1:30-4:30.

Professor Hitchcock.

Laboratory fee, \$4.00 each.

VA2. ELECTRO COMMUNICATION.

Two class exercises and two laboratory periods a week.

First quarter, 2 $\frac{2}{3}$ semester hour credits. Class, W, F, IX; laboratory, A.

Professor Hitchcock.

3. MECHANICS OF SOLIDS AND FLUIDS.

Prerequisites: A good working knowledge of Elementary Mathematics, including Analytic Geometry.

Sophomore and Junior years, first semester. 3 hours. I.

Professor Hitchcock.

4. HEAT AND SOUND. A continuation of Physics B3.

Sophomore and Junior years, second semester. 3 hours. I.

Professor Hitchcock.

5a, C5b. MAGNETISM, ELECTRICITY AND LIGHT. A continuation of Physics B3 and B4.

Sophomore and Junior years, both semesters. 3 hours.

(Not given in 1918-1919.)

Courses B3, B4 and C5 are designed to meet the physics requirements of the best engineering schools for mechanical and electrical engineering courses.

9a, C9b. PHYSICAL MEASUREMENTS. An exposition of the theory and methods of physical measurements; instruc-

tion and practice in the adjustment and use of instruments of precision in the various branches of the subject.

Junior and Senior years, both semesters. 1 hour each.

Professor Hitchcock.

Laboratory fee, \$4.00 each.

D11. ADVANCED MAGNETISM AND ELECTRICITY. A theoretical discussion of the subject; combined with a study of the more important applications in electrical engineering.

Prerequisites: Elementary Mathematics, Analytic Geometry, Differential and Integral Calculus.

Junior and Senior years, first semester. 3 hours. A.

Professor Hitchcock.

(In 1918-1919 given in the second and third quarters, receiving semester hour credits each.)

D13a, D13b. APPLIED MECHANICS. Same as Engineering D13.

Junior and Senior years, both semesters. 3 hours.

Assistant Professor Belcher.

(Not given in 1918-1919.)

PHYSIOLOGY

A1a, A1b. APPLIED PHYSIOLOGY AND HYGIENE. A general course in the essentials of personal hygiene, with such brief excursions into the field of physiology as are necessary to an understanding of the hygienic principles involved. Supplementing this study of the problems of the individual, there is included a survey of the principles of public hygiene and sanitation, and a brief résumé of the recommended measures concerned in first aid to the injured.

Freshman year, both semesters. 1 hour each. T or S, V or W, III.

Assistant Professor Schott.

11. PUBLIC HYGIENE. Advanced course. A series of lectures on the principles and requirements of public sanitation, and the problems of general morbidity and mortality. Required of all Juniors, second semester. A. Associate Professor Stoughton.

13. PROBLEMS OF HEREDITY AND EUGENICS, AND RELATED QUESTIONS OF PERSONAL AND PUBLIC HYGIENE. Advanced course. Required of all Seniors, second semester. A. Associate Professor Stoughton and Miss Spear.

B3a, B3b. ANATOMY AND PHYSIOLOGY. Human and comparative. Lectures and laboratory work. Parts and systems studied and compared with the same in the lower vertebrates. Azoux models, preserved specimens and organs, and skeletons are used. Careful drawings by each student of sections, tissues and organs. (Gray, Quain, Stewart, Wells, Mivart, Reighard, Jennings, and other works of reference.)

Lecture room, two hours a week; laboratory, one exercise a week. Sophomore and Junior years, both semesters. 3 hours each. Class W, F, IX; laboratory, Th, 1:30-4:30. Assistant Professor Schott. Laboratory fee, \$3.00.

15. HISTOLOGY. Vertebrate. The microscopic study of tissues and organs of man and the higher vertebrates. Special attention given to methods. Those intending to study medicine after graduation will find this course and the course in embryology very helpful.

Prerequisite: Physiology B3 and B4. Junior and Senior years, first semester. 3 hours. Professor Hilton. Laboratory fee, \$8.00. (Not given in 1918-1919.)

D6. HISTOLOGY. A continuation of D5, including consideration of some special methods and problems.

Prerequisite: Physiology D5.

Junior and Senior years, second semester. 3 hours.

Professor Hilton.

Laboratory fee, \$7.00.

(Not given in 1918-1919.)

D7. EMBRYOLOGY. Comparative vertebrate embryology. A study of the development of vertebrates up to and including the formation of adult organs. The eggs of amphibians and the embryos of birds and mammals, furnish the material for the study.

Prerequisite: Physiology B3, or Zoology B11.

Junior and Senior years, first semester. 3 hours. A.

Professor Hilton.

Laboratory fee, \$8.00.

D8. EMBRYOLOGY. A continuation of D7. Some attention may be given to special methods and problems.

Prerequisite: Physiology D7.

Junior and Senior years, second semester. 3 hours. A.

Professor Hilton.

Laboratory fee, \$7.00.

PSYCHOLOGY AND EDUCATION

B1. ELEMENTS OF PSYCHOLOGY. A general view of the field of psychology, its aim, methods, values, relation to other sciences, and its application to practical conduct. Class and individual experiments to illustrate and supplement the text. Text book, lectures, recitations and laboratory work.

Required in all courses.

Sophomore or Junior year, either semester. 3 hours. V.

Professor Ewer.

3a, B3b. PRINCIPLES OF PSYCHOLOGY. This course is intended for those students who desire a more extended study of psychology along the lines of B1. More emphasis is laid upon the comparative study of different systems and upon the results of experimentation. Text-book, lectures, reports and laboratory work.

Those who take this course fulfill the three-hour requirement in psychology and get three hours in addition.

sophomore or Junior year, both semesters. 3 hours each. IV.
Professor Ewer.

7. EDUCATIONAL PSYCHOLOGY. A course in the practical application of psychology to the educative process, the theories of the functions of education and the laws which govern the educative procedure. The topics are treated in the light of modern psychological and physiological investigations, and the course is intended for those going into the professions of teaching and the ministry. Text-book, lectures and assigned readings.

Prerequisite: Psychology B1.

Junior and Senior years, first semester. 3 hours. VI.
Professor Ewer.

8. APPLICATIONS OF PSYCHOLOGY. A study of the application of psychology on certain practical aspects of life, especially health and disease, work and recreation. Particular applications to the fields of business, law and the ministry will also be considered. Text-book, lectures and collateral readings.

Prerequisite: Psychology B1 or B3.

Junior and Senior years, second semester. 3 hours. III.
Professor Ewer.

1a, C11b. HISTORY OF EDUCATION.. This course traces the methods and ideals of educational thought and practice developed in various nations and periods. The history

of education in the United States and the problems now fronting all of our educational agencies are given special attention during the second semester.

Junior and Senior years, both semesters. 3 hours each. II.
Professor Norton.

D6. THE PSYCHOLOGY OF SUGGESTION. A study of phenomena of suggestion in normal and abnormal individuals and social life. Textbook, lectures, collateral reading theses.

Prerequisite: Psychology B1 or B3.

Junior and Senior years, second semester. 3 hours. VI.
Professor Ewer.

D12. SOCIAL PSYCHOLOGY. The psychological principles underlying social order and progress; the social instincts; forms of social suggestion; the psychology of crowd and of organized groups; applications of principles to contemporary social problems.

Junior and Senior years, second semester. 3 hours.

Professor Ewer.

(Not given in 1918-1919.)

ROMANCE LANGUAGES

FRENCH

During the first quarter of 1918-1919 members of the Student Army Training Corps were permitted to take Beginning French designated WA1a, for 1 1/3 semester hour credits and Military French, designated WB6a, for 2/3 semester hour credits.

A1a, A1b. ELEMENTARY. Aldrich and Foster's Elementary French. Easy prose and poetry, including selections from Daudet, Theuriet, Coppée and others; composition, dictation and sight reading throughout course.

Freshman and Sophomore years, both semesters. 3 hours each. Five sections: I, II, VI, VII, IX.

Associate Professor Jones, Mrs. Vredenburg, Mr. Gazzó.

2a, A2b. INTERMEDIATE. Grammatical review; selected readings from the easier modern authors; sight reading and conversation.

Prerequisite: One year of high school or one semester of college French, or equivalent.

Freshman and Sophomore years, both semesters. 2 hours each. I, V.

Dr. Gazzó.

3a, B3b. FRENCH NOVEL OF THE NINETEENTH CENTURY. Selections from Hugo, Balzac, De Vigny, Sand and other novelists of the period; lectures and essays in French; conversation.

Prerequisite: French A1 or A2, or equivalent.

Freshman and Sophomore years, both semesters. 3 hours each. The sections: II, III, IV.

Dr. Pasmore, Mrs. Vredenburg, Mr. Gazzó.

4a, B4b. GRAMMATICAL ANALYSIS. A course in French composition and conversation, required of those making Romance Languages their major.

Prerequisite: French A1 or A2, or equivalent.

Freshman and Sophomore years, both semesters. 2 hours each. I, III.

Dr. Vredenburg.

5a, 5b. MILITARY FRENCH. A practical course in French conversation and military terms. Basis of study, Picard's French-English Military Manual (Picard).

Prerequisite: French A1 or A2, or equivalent.

Active for men. Both semesters. 3 hours each. III.

Dr. Gazzó.

6. CLASSIC DRAMA. Critical study of plays of Corneille, Racine and Molière; lectures upon the literary history of the period. This course, and all to follow, conducted entirely in French.

Prerequisite: French B3, or equivalent.

Junior and Senior years, first semester. 3 hours. I.

Associate Professor Jones.

C8. SEVENTEENTH CENTURY PROSE. Selections from Descartes, Pascal, La Bruyère, Mme. de Sévigné, and other essays and lectures upon the literary history of the period.

Prerequisite: French B3, or equivalent.

Junior and Senior years, second semester. 3 hours. I.
Associate Professor Jones.

D9. LITERATURE OF THE EIGHTEENTH CENTURY. Selections from Montesquieu, Voltaire and Rousseau; plays of Beaumarchais; Le Sage. Lectures upon the literary history of the period.

Alternates with French D11.

Prerequisites: French C7 and C8.

Junior and Senior years, first semester. 3 hours. V.
Associate Professor Jones.

D10. ROMANTIC SCHOOL. Readings from Chateaubriand, Hugo, Alfred de Musset, Lamartine, and others. Lectures upon the significance and influence of the Romantic movement.

Alternates with French D12.

Prerequisites: French C7 and C8.

Junior and Senior years, second semester. 3 hours. V.
Associate Professor Jones.

D11. LITERATURE OF THE RENAISSANCE. Rabelais, Calvin; the poetry of Marot; lectures upon the history of French literature; collateral readings and themes.

Alternates with French D9.

Prerequisites: French C7 and C8.

Junior and Senior years, first semester. 3 hours.
Associate Professor Jones.
(Not given in 1918-1919.)

D12. RONSARD TO MALHERBE. La Pléiade; Du Bellay and the "Défense et Illustration"; selections from Malherbe.

ne. Lectures upon the history of French literature; collateral readings and themes.

ternates with French D10.

erequisites: French C7 and C8.

Junior and Senior years, second semester. 3 hours.

Associate Professor Jones.

(Not given in 1918-1919.)

D13a, D13b. CONTEMPORARY FRENCH NOVEL. Critical study of the most modern movement in French prose. Selected readings from Loti, Bourget, Rolland, De Coulevain, Maupassant, Prévost, Barrès, Tinayre, the Tharauds, and others.

erequisites: C7 and C8. (This course may be elected only with the written consent of head of department.)

Junior and Senior years, both semesters. 3 hours each.

Assistant Professor Pecker.

(Not given in 1918-1919.)

D14a, D14b. PHONETICS AND FRENCH CONVERSATION. Study of French sounds. An advanced course in French pronunciation. Geddes, French Pronunciation; Passy, Lectures sur l'orthographe mise en transcription phonétique; Passy-Rambau, Grammaire phonétique française.

erequisites: French C7 and C8, and must be accompanied by French D10 or D11 and D12.

Junior and Senior years, both semesters. 2 hours each. W, F,

Miss Pasmore.

SPANISH

D11a, B21b. ELEMENTARY. Olmstead and Gordon's Spanish Grammar. Padre Isla's Gil Blas de Santillana; Cervantes, El Capitán Veneno or El Sombrero de Tres Picos; selections from Becquer; conversation and dictation.

Freshman and Sophomore years, both semesters. 3 hours each. IV. Miss Vredenburgh.

C23a, C23b. CONTEMPORARY SPANISH NOVEL. Selections from the works of Pérez Galdós, Valera, Pereda, Blasco Ibáñez, and others; during the second semester attention given the literary development in Spanish America, with reading of Isaacs's *María*.

Prerequisite: Spanish B21, or equivalent.

Freshman and Sophomore years, both semesters. 3 hours each.
Associate Professor Jones.

C24a, C24b. COMPOSITION AND COMMERCIAL CORRESPONDENCE. An intermediate course in composition and epistolary usages, required of those majoring in Romance Languages and specializing in Spanish.

Prerequisite: Spanish B21, or equivalent.

Freshman and Sophomore years, both semesters. 1 hour each.
T, X.

Associate Professor Jones.

D25. THE GOLDEN AGE OF SPANISH LITERATURE: DRAMA. A critical study of the works of Lope de Vega, Tirso de Molina and Calderón. Lectures upon the history of Spanish literature. This course and all to follow are conducted entirely in Spanish.

Prerequisite: Spanish C23, or equivalent.

Junior and Senior years, first semester. 3 hours. VII.

Associate Professor Jones and Mrs. Vredenburgh.

D26. SPANISH PROSE OF THE SIXTEENTH AND SEVENTEENTH CENTURIES. Lazarillo de Tormes and the Picaresque novel; Cervantes, readings from *El Quijote* and *Novelas Ejemplares*. Lectures upon the history of Spanish literature; collateral readings and assigned topics.

Prerequisite: Spanish C23, or equivalent.

Junior and Senior years, second semester. 3 hours. VII.

Associate Professor Jones and Mrs. Vredenburgh.

D27a, D27b. CONVERSATIONAL SPANISH. An advanced course in Spanish composition and conversation, a practical

are designed especially for those fitting to teach Spanish, may be taken only following or accompanied by Spanish and D26.

Junior and Senior years, both semesters. 1 hour each. Th,
Associate Professor Jones.

ITALIAN

A, C31b. ELEMENTARY. Hossfeld's Italian Grammar; (De Amicis); I Promessi Sposi (Manzoni); short stories and plays from modern authors; drill in pronunciation and composition.

Junior and Junior years. 3 hours each. XI.
Associate Professor Jones.

C. ITALIAN CLASSICS. Boccaccio, Ariosto and Tasso. Lectures upon the history of Italian literature. This course and C34 are conducted in Italian.

Prerequisite: Italian C31, or equivalent.
Junior and Senior years, first semester. 3 hours each. A.
Associate Professor Jones.

F. DANTE AND PETRARCH. The Inferno, with selections from the Purgatorio and Paradiso; Le Rime (Petrarch), edition Suc. Le Monnier, Florence. Lectures upon the history of Italian literature.

Prerequisite: Italian C31, or equivalent.
Junior and Senior years, second semester. 3 hours. A.
Associate Professor Jones.

SECRETARIAL

The courses listed below receive credit only if taken in conjunction with English Composition or Economics B16a and B16b. Otherwise these courses do not count towards graduation. They are laboratory courses.

A, A1b. STENOGRAPHY.

Junior and Senior years, both semesters. 1 or 2 hours each. A.
Assistant Professor Thomson.
Laboratory fee, \$7.50 per hour per semester.

A2a, A2b. TYPEWRITING.

All years, both semesters. 1 or 2 hours each. A.

Assistant Professor Thomson.

Laboratory fee, \$7.50 per hour per semester.

A3a, A3b. FILING AND REFERENCE. This course covers up the various methods of indexing and filing used in business houses and the study of reference books that might be useful in a business office.

Freshman and Sophomore years, both semesters. 1 hour each.
Miss Ewing.

Laboratory fee, \$7.50 each.

A24. CORRESPONDENCE. See English A24.

SOCIOLOGY

(*See Economics and Sociology*)

SPANISH

(*See Romance Languages.*)

ZOOLOGY

B11. GENERAL ZOOLOGY. Lectures and laboratory work. Types of classes and phyla of animals dissected and studied. Careful drawings made of parts and organs. Constant use of the microscope. The large collections of the museum used for illustrative purposes. (Parker, Haswell, Brant and other books of reference.)

Class room, two hours a week; laboratory, one exercise a week.

Prerequisites: Biology A1 and A2, or equivalents.

Sophomore and Junior years, first semester. 3 hours. Class meets T, Th, II; laboratory, M, 1:30-4:30.

Professor Hilton.

Laboratory fee, \$5.00.

B12. GENERAL ZOOLOGY. A continuation of Zoology B11. A broad treatment of the comparative anatomy and physiology of vertebrates, based upon detailed work with

representative types of the fishes, amphibians, reptiles, birds and mammals. Laboratory work with skeletons and preserved specimens.

Class room, two hours a week; laboratory, one period.

Prerequisites: Physiology B3 or Zoology B11.

Sophomore and Junior years, second semester. 3 hours. T, Th, laboratory, M, 1:30-4:30.

Professor Hilton.

Laboratory fee, \$5.00.

B18. ENTOMOLOGY. The anatomy and physiology of insects studied and their life history traced. Insects reared and their transformation studied; species of all orders identified by use of laboratory manuals. A good collection of native and exotic insects is at the command of the student. Laboratory and field work made prominent.

Class room, two hours a week; laboratory, one exercise a week.

Prerequisite: Biology A1, or Physiology B3, or Zoology B11.

Sophomore, Junior, and Senior years, second semester. 3 hours.

Class room, M, W, VII; laboratory, T, or Th, 1:30-3:30.

Professor Hilton.

Laboratory fee, \$5.00.

C31. SYSTEMATIC INVERTEBRATE ZOOLOGY. Local groups of invertebrates exclusive of insects are studied in the field and laboratory. The particular groups considered are: polychaetes, chilopods, arachnids.

Prerequisite: Zoology B11 or B18.

Sophomore or Junior year, first semester. 3 hours. Lecture, one hour a week; laboratory and field work, two periods a week.

Professor Hilton.

Laboratory fee, \$5.00.

(Not given in 1918-1919.)

C32. SYSTEMATIC VERTEBRATE ZOOLOGY. Local vertebrates, especially birds, but also amphibia, reptiles, and mammals studied in the laboratory and in the field.

Prerequisite: Zoology B11.

Sophomore or Junior year, second semester. 3 hours. Lecture one hour a week; field and laboratory work, two periods a week.

Professor Hilton.

Laboratory fee, \$3.00.

(Not given in 1918-1919.)

D33. COMPARATIVE NEUROLOGY. Comparative anatomy of the central nervous system of vertebrates. The laboratory work consists of special dissections and the study of microscopical preparations.

Prerequisites: Zoology B11 and B12, or Physiology B3 and B4.

Junior and Senior years, first semester. 3 hours. Lecture, one hour a week; laboratory, two periods a week. A.

Professor Hilton.

Laboratory fee, \$5.00.

C13. ADVANCED ZOOLOGY. A study of special groups of invertebrates or vertebrates well represented in California and on the West Coast. A continuation of Zoology B11 and B18, chiefly laboratory and field work.

Prerequisite: Zoology B11 or B18.

Junior and Senior years, first or second semester. 2 or 3 hours.

Professor Hilton.

D15. ADVANCED ZOOLOGY. A continuation of Zoology C13.

Prerequisite: Zoology C13. Field work and laboratory.

Junior and Senior years, either semester. 3 hours. A.

Professor Hilton.

Laboratory fee, \$7.00.

D19, D20. SPECIAL ENTOMOLOGY. Detailed investigations into the anatomy, life histories and economic relations of some of the groups of insects most prejudicial to the interests of mankind. Designed especially for those students intending to become growers, planters, economic entomologists, or doctors of medicine.

Prerequisites: Zoology B11 and B18.

Junior and Senior years, first and second semesters. 3 hours each. Field work and laboratory. A.

Professor Hilton.

Laboratory fee, \$7.00.

ADMINISTRATION

REGISTRATION

All students are required to register on one of the regularly announced days of registration preceding the opening of the class work of each semester. A fee of two dollars is charged for later registration and a payment of one dollar for any change in the list of subjects chosen. This latter payment is admitted in the case of new students registering for the first time, provided the changes are made within a week of the opening day of the registration period.

Students are admitted only to those courses for which they are formally registered.

MATRICULATION

Matriculation implies the meeting of all entrance requirements and the proven ability to carry college work. To this end the standing of all new students is provisional until after they have been in residence for one semester. At that time those are matriculated who have shown themselves in accord with the spirit of the College, who have done a satisfactory quantity of work during their semester of residence and whose entrance units are acceptable.

ELECTION OF COURSES

On or before the first Saturday in January after the Christmas recess, and the first Saturday in June, all resident students must fill out a schedule listing their choice of subjects for the following semester.

Changes from this schedule may be made upon the payment of a fee of one dollar. Failure to prepare such schedule at the appointed time subjects the student to a fee

of two dollars. Students may not select less than twelve hours of work without the special permission of the Classification Committee.

PUBLIC ASSEMBLIES

Devotional exercises conducted by the President, members of the faculty, or by some invited guest, are held in the chapel Monday, Wednesday and Friday mornings, and students are expected to be present.

On Thursday morning the regular and called meetings of the Associated Students are held from time to time.

Attendance upon the Sunday morning service in the Claremont Church is expected except in cases where permission is given to attend services elsewhere. Such permission will be granted on request.

REPORTS

A record of the scholarship and deportment of each student is kept, and deficient students are reported to the Registrar. Special reports are made at or near the Thanksgiving and Spring recesses; notification is sent to the parents of students reported as deficient then, or at the end of the semester. Grades will be sent at any time upon request to parents.

The grade of scholarship is determined by the daily work of the class-room supplemented by frequent test reviews and by final examinations.

The aim is to encourage faithfulness and regularity in daily work rather than spasmodic effort to meet some single test.

PHYSICAL ATTENTION

The physical care of students is a matter of special concern to the College and the advantages of unusual attention and opportunity are offered. The climate of Southern California

rs an out-of-door life the year around. Oversight is n to open-air athletics in all seasons. A regular physician n the faculty of the College under whose direction every ent on entering has a physical examination. Regular k in Physical Culture is prescribed throughout the four s, and courses in Physiology and Hygiene are given. A e swimming pool is provided, access to which is free to tudents, subject only to a semi-annual physical examina- . The medical advice of the College physician is ordi- ly available free of charge to all students, subject to cer- conditions of hours and location of residence, the Col- meeting these bills; providing that all nursing, surgical sing, and medicines are at the expense of the ill or ind- d. *The College, however, reserves the right to discon- e this individual medical service at any time without vious notice.* As a natural result of all this attention the th of the College is such as to give special assurance to onsidering attendance at Pomona.

GENERAL REQUIREMENTS

tudents are expected to be loyal to the spirit and purpose he institution and to maintain regular attendance on all ege appointments. Any who fall below grade in scholar- , or who for any reason do not prove desirable members the student body, may be dismissed without specific ges.

is urgently pointed out to both students and parents that value of a college education consists in no small degree in fullest participation in the college atmosphere and life. important, therefore, that all absence through the college r should be avoided. Some of the most important of the ege values are lost by absences on Saturday and Sunday, which days are centered particular and vital phases of the

common life, and it is therefore urged that over-Summer visits at home or elsewhere be avoided.

The use of tobacco is disapproved and discouraged at all times.

A copy of the Circular of Information may be obtained on application to the Registrar. It should be in the hands of all students.

EXPENSES

ROOMS. Lists and descriptions of rooms available for men students are kept at the Business Office, for women students at Sumner Hall. Furnished rooms outside the College buildings are rented at prices ranging from twenty to forty-five dollars for the semester. Students are permitted to rent only at places approved by the faculty.

To avoid misunderstanding between students and room holders, it is advised that agreements regarding rooms be made in written form. Unless written agreement to the contrary is made, it will be assumed that rooms are rented for the semester.

Change of rooms is made only by permission of the faculty.

DORMITORIES—*Sumner Hall.* Women not living at their own homes, unless excused by the faculty, are expected to have a room in Sumner Hall, which accommodates seventy. It is a commodious and pleasant hall, where the young women come under the direct care of the Dean of Women. In addition to the parlors, which are open to the students for the reception of their friends, there is also on the first floor a large and attractive recreation hall.

Sumner Hall is well equipped with all modern conveniences, including electric lights, steam heat, baths, and laundry furnished with stationary tubs and electric irons for the use of roomers.

There are both single and double rooms, which are well heated and ventilated. Each room is provided with the necessary furnishings, including rug for the floor. The only articles to be supplied by the students are towels, and linen covers for a single bed.

Careful attention is given to the health of the young men residing in the Hall. Illness is rare, yet for such cases as occur, there is provided, opening directly from the doctor's room, a pleasant, sunny rest-room, where patients are given the best of care.

Rooms in Sumner Hall are rented for the College year, each occupant paying from fifty to eighty dollars, according to the location of the room and the number of occupants. The Hall is closed during the Christmas and Spring vacations. A deposit of five dollars is necessary to secure a room in the Hall, and should accompany the application. Rooms are assigned in order of application. The deposit fee is credited on the rent of the room.

The Hall is opened on the Saturday before the beginning of the College year and closed the Thursday after Commencement.

SMILEY HALL. This dormitory for men has both single rooms and suites of three rooms accommodating two students. The dormitory has all modern conveniences and is completely furnished. The only articles to be provided by students are towels, and linen and covers for a single bed. All rooms are equally desirable, the basis of choice in most cases being one's preference for the eastern or western out-

Rooms in Smiley Hall are rented for the College year, each occupant paying sixty dollars. In case of withdrawal because of sickness an equitable adjustment of rent will be made.

These terms do not include the use of the dormitory during the Christmas and Spring vacations, when the Hall will be closed, unless a number desire to remain, in which case the cost of keeping the building open will be an additional charge. Damage to rooms will be charged to the occupant.

A deposit of five dollars is necessary to secure a room, and should accompany the application. This amount will be retained as a breakage fee from which deductions will be made for all individual and communal damages to the building, the balance being returned at the end of the year. The dormitory is opened on the Saturday before the beginning of the College year and closed the Thursday after Commencement.

The College reserves the right to dismiss from the dormitory without rebate any student who has shown himself a disturbing or undesirable occupant.

BOARD. In the College Commons, an unusually attractive and well equipped dining-room in the Claremont Inn, provision is made for the boarding of students under the direct management of the College. A representative committee of students and faculty cooperate in maintaining satisfactory conditions. The rates are the lowest consistent with good quality of food and service, the approximate cost for 1917-1918 having been one hundred and eighty-nine dollars.

The Pomona College spirit is due in no small measure to the common dining hall. There the students meet in pleasant surroundings, are waited upon by companions in study, discuss together college topics, join in enthusiastic backing of college teams and glee clubs and have favorable opportunities for forming close and lasting friendships. For these reasons and for its unifying influence on college life, the faculty regard it as exceedingly desirable that students should board at the Commons.

Those wishing to board at other approved places may

by permission of the faculty, but such permission will only be given to those living in the College buildings.

SUMMARY OF EXPENSES—The necessary expense for the college year, exclusive of fees for special courses and expenses which are purely personal, varies from \$275 to \$400. Bills are due each semester in advance and must be paid on registration. If parents desire bills to be sent home, written request should be made before the beginning of a semester.

No student will be retained in the institution or given honorable dismissal whose bills are not paid or arranged for.

TUITION

Tuition and other charges are ordinarily made upon a semester basis; for the year 1918-1919 they are upon a quarter basis, as follows:

GENERAL CHARGES

Regular tuition, including all general privileges, per quarter...	\$36.00
Tuition for students carrying less than ten hours of work, for each such hour, per quarter.....	3.50

CHARGES IN MUSIC AND ART*

For those paying regular tuition:	
For each half-hour private lesson per week in music, per quarter	\$17.50
For each two-hour class lesson per week in art, per quarter..	10.00
For those carrying less than ten hours of college work, exclusive of work in music or art:	
For one half-hour private lesson per week in music, per quarter	30.00

*No semester hour credit is given for less than two lessons per week in branch of music or art.

For two half-hour private lessons per week in music, per quarter	47
For each half-hour private lesson per week in music, in excess of two, per quarter.....	17
Ensemble course in violin, per quarter.....	2
For each two-hour class lesson per week in art, per quarter..	15
Sketch class, per quarter.....	1

Students may register for applied music and art at any time. Such students, if they enter during a quarter, should consult the Registrar as to charges.

Visitors not regularly enrolled are charged a minimum fee of five dollars.

FEES

Diploma fee, \$5.00.

Physics and Chemistry, deposit for breakage, \$5.00.

Laboratory fees range from \$4.00 to \$15.00. The exact fee for a given course is stated in connection with the description of that course under Departments of Instruction; advanced courses only does it exceed \$10.00.

Practice fees for the use of college pianos and organs:

Piano

One-half hour daily (students of Voice only), per quarter....	\$ 2.
One hour daily, per quarter.....	3.
Two hours daily, per quarter.....	6.
Three hours daily, per quarter.....	8.

Pedal Piano

One hour weekly, per quarter.....	1.5
Two hours weekly per quarter.....	2.5

ADMINISTRATION

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Practice Organ

hours weekly, per quarter.....	3.75
hours, weekly, per quarter.....	5.50
hours weekly, per quarter.....	7.00
hours weekly, per quarter.....	8.50
hours weekly, per quarter.....	10.00

Large Organ

half hour weekly, per quarter.....	1.50
hour weekly, per quarter.....	3.00

Pedal Organ

hours weekly, per quarter.....	6.00
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RETURN OF TUITION

After the first week of the quarter there is no refunding of any part of the tuition either for courses dropped or for failure to complete a quarter's residence, except that one-half of the tuition is refunded to any leaving college before the middle of any quarter on account of illness.

HONORS AND PRIZES

COMMENCEMENT EXERCISES

The honor of speaking on Commencement Day awarded five members of the graduating class who distinguished themselves in scholarship and who possess literary and oratorical ability.

THE PHI BETA KAPPA SOCIETY

A chapter of the national scholarship honor society, Phi Beta Kappa, was established at Pomona College, March 15, 1914. Upperclassmen "who are of good moral character, who are candidates for the degree of Bachelor of Arts and who are distinguished for breadth of culture and excellence of scholarship," are eligible to membership.

FINAL HONORS AT GRADUATION

Those students who have two hundred or more credits graduated with the honor *cum laude*; those who have one hundred and fifty or more credits are graduated with the honor *magna cum laude*; and those who have three hundred or more credits are graduated with the honor *summa cum laude*.

SCHOLARSHIP HONORS

Honors for scholarly attainment are awarded at the end of each semester to matriculated students, candidates for the bachelor of arts degree, as follows:

High Honors are awarded to those who have attained an average of A grade.

General Honors are awarded to those who fall short of an average of A grade by not more than the equivalent of one B grade in a three-hour subject.

Departmental Honors are awarded to those who attain double A grade in any subject.

Honors are granted in no case where a student has a grade below B in any subject.

PRIZES

The following prizes are offered for proficiency in the work in the several departments:

THE LLEWELLYN BIXBY MATHEMATICS PRIZE. A prize for excellence in Analytic Geometry and Calculus; open to all students coming with specified conditions. A prize of ten dollars is given by Mr. Llewellyn Bixby.

THE DOLE PRIZES. A prize debate, open to the Sophomore class, on some subject selected by the faculty, is arranged for the close of the second semester. First and second prizes of ten and five dollars respectively, established by the late Mr. J. H. Dole, in memory of his brother, Mr. W. B. Dole, are endowed by Mr. J. Albert Dole and Mrs. A. M. Dole.

THE HAGER PRIZES. Prizes for best three essays on a foreign missionary subject, open to all students. Prizes of five dollars each are endowed by Mr. and Mrs. C. R. Hager.

THE KINNEY PRIZES. A prize declamation contest, open to the members of the Freshman class, occurs toward the end of the first semester. First and second prizes of ten and five dollars, respectively, are given by Mrs. H. N. Kinney.

THE LORBEER PRIZES. Prizes for the best essay on the subject, "How to Keep Well"; open to all who take the course in Anatomy and Physiology. First and second prizes of fifteen and ten dollars, respectively, are given by Dr. Thomas L. Lorbeer, '03.

THE MONCRIEFF ASTRONOMY PRIZE. A prize given to the student completing the first year course in Astronomy, taken regularly in class, whose interest in the study and proficiency in the observatory work are indicated by the best notebook kept in accordance with the teacher's suggestion. A prize of ten dollars is given by Miss Flossie C. Moncrieff, '11.

THE MUDGE LATIN PRIZES. Prizes for excellence in Latin offered to Sophomores completing Latin D14. First and second prizes of ten and five dollars respectively are endowed by friends of the College.

THE VAILE PRIZES. Prizes for the best essay or oration on the general subject of Agriculture in Southern California; open to the Junior and Senior classes. First and second prizes of ten and five dollars, respectively, are endowed by Mr. Charles S. Vaile.

SCHOLARSHIPS AND BENEFICIARY AID

The income of certain funds is used toward paying the tuition fees of students who are in pecuniary need, and, by authorization of the trustees, is distributed annually through a committee of the faculty. Scholarship aid is given only to students who are or intend to become candidates for a degree from Pomona College, who maintain a high standard of honor, who are economical in their habits, who do not use tobacco, who are regular in their attendance upon college exercises, and whose scholarship meets the following conditions: The earning in each semester of the Freshman year at least twelve credits; in each subsequent semester of at least fifteen credits.

Applicants for aid who have not yet entered college should forward to Professor H. E. Robbins, Chairman of the Committee on Scholarships, a formal application accompanied by two letters, one from parent or guardian and the other from principal or teacher, giving information concerning need, character and attainments. They should also send a certified statement of their scholastic record. All applications for aid must be renewed annually on or before May 1st.

Aid may be withdrawn at any time from students who have not to have conformed to the conditions, and is permanently withdrawn after the second forfeiture due to low standing or unsatisfactory deportment.

Recipients of scholarship aid may be called upon to assist the College in ways that do not interfere with their studies.

Awards are made from the income of the following funds:

THE FRANCIS BANCROFT MEMORIAL FUND, \$1,500. Given by Mrs. James T. Ford of Los Angeles, California, in memory of her father.

A Fund of \$2,500. Given by L. H. Barrows.

THE H. G. BILLINGS MEMORIAL SCHOLARSHIP, \$1,000. Given by Mr. E. A. Billings of Los Angeles, California, in memory of his husband.

THE MABEL S. BRIDGES MEMORIAL SCHOLARSHIP, \$3,500. Given by Mr. and Mrs. A. S. Bridges of San Diego, California, in memory of their daughter. Available for women.

THE BRISTOL MEMORIAL FUND, \$400. A fund raised as a memorial to the Reverend Sherlock Bristol.

THE HENRY HERBERT BROWN SCHOLARSHIP FUND, \$1,000. Given by Mrs. Fannie E. Brown of Los Angeles, California, in memory of her son.

THE AGNES K. CRAWFORD MEMORIAL FUND, \$1,000. Given by David R. Crawford and William Crawford of Pomona, California, in memory of their mother.

A Fund of \$2,600. Given by Mary E. Elwood of Redlands, California.

A Fund of \$2,500. Given by Rev. James T. Ford of Los Angeles, California.

THE THOMAS F. HOWARD MEMORIAL SCHOLARSHIP, \$2,000. Given by Dr. and Mrs. H. G. Brainerd of Los Angeles, California, in memory of Mrs. Brainerd's father.

A Fund of \$2,000. Given by Henry L. Kuns.

A Fund of \$1,800. Given by Miss Jean Loomis, '97, of Nanking, China.

A Fund of \$5,000. Given by Mrs. Loraine H. Page of Pomona, California. (\$3,000 of this may at some time be used for other purposes.)

THE ARTHUR WARREN PHELPS MEMORIAL SCHOLARSHIP, \$2,000. Given by Mrs. C. S. and Mr. C. A. Phelps of Claremont in memory of their son and brother.

THE LYDIA PHELPS MEMORIAL FUND, \$4,000. Given by Hiram Phelps of Ontario, California, in memory of his wife.

THE JOHN D. POTTER MEMORIAL FUND, \$2,000. Given by Mrs. S. T. Potter of Westboro, Massachusetts, in memory of her husband.

THE REMBRANDT CLUB SCHOLARSHIP. The sum of twenty dollars per semester. Available for students in Art.

und of \$1,800. Given by Dr. Anna H. Searing of Escondido, California.

CLYDE H. SHIELDS SCHOLARSHIP, \$200 (to be increased). Given by R. P. Shields of San Diego in memory of his oldest son, who was drowned in 1894, when about twenty-one years of age.

und of \$2,000. Given by Miss Susan E. Thatcher of San Diego.

und of \$2,500. Given by Mrs. Maria T. Wardwell of Plymouth, Connecticut.

und of \$2,000. Given by Henry S. West of Los Angeles.

The College also administers a loan fund, established by George H. DeKay, Jr., in memory of his brother Frelin Campbell DeKay. By means of this fund, it is possible to operate in a moderate way, and temporarily, with the pressing need of students. This fund has been of such important service as to indicate the great need for the increase of such resources, which in the hour of special emergency may often save a student to a college career.

SELF-SUPPORT

A committee of the faculty endeavors to find employment for students needing to earn a part of their expenses. Many are thus helping themselves by various forms of labor such as janitor work, waiting on tables at the Commons, general house work, gardening and the like. The most desirable positions are in general secured by upper-classmen who have proven themselves good workers and good students, and those coming to the College for the first time should be content if any work which they can satisfactorily do is secured for them. Students in any case should come prepared to pay all bills for at least one semester. Their record during the semester will be a large factor in deciding what opportunities for self-help will be open to them. Applications for aid in securing employment should be addressed to Professor H. E. Robbins, Chairman of the Committee on Student Aid and Labor.

BUILDINGS AND EQUIPMENT

The College grounds consist of about one hundred acres of which sixty are included in Blanchard Park, about thirty in Alumni Field, and the remainder in the campus proper.

There are fifteen buildings on the campus, heated from a central heating plant.

The Mary L. Sumner Hall, named in memory of the wife of Professor Charles B. Sumner, is a dormitory affording accommodations for seventy women.

Holmes Hall, a memorial of Cyrus W. Holmes, Jr., of Monson, Massachusetts, reconstructed in 1916 in conformity with more modern plans for buildings and campus, is devoted mainly to chapel, recitation rooms, and various offices for administration.

Pearsons Hall of Science, the gift of Dr. D. K. Pearson, contains the museum, and the laboratories and lecture rooms of the departments of chemistry, botany, physics and geology. In this building, too, is the Business Office.

The museum is equipped especially for the work in biology, botany and zoology. It contains an abundance of general synoptical material, including about two hundred and fifty thousand zoological specimens and an herbarium of about two hundred thousand sheets of plants. The Seaver-Rivers collection contains fifty thousand specimens of fossil Mollusca collected in the Pliocene of Santa Monica, California, by Dr. Rivers, formerly Curator of the Museum of the State University.

The chemical laboratories are equipped with hoods, gas generators, steam baths, and the usual appliances demanded for thoroughly good work. The department is equipped throughout with water, gas and electricity and has individual desks, and equipment for one hundred and eight students.

the physical laboratories are well equipped with apparatus selected from standard patterns of the best domestic and foreign instrument makers. Each year valuable additions are made to the equipment.

The biological laboratories contain an extensive series of specimens and models for use in comparative anatomy. For laboratory work, in general and advanced zoology, there is abundant material, both wet and dry, from all parts of the world. The reference collections for use in general and special entomology are in many respects unexcelled.

The botanical equipment, besides the herbarium, has for general mycology a complete bacteriological outfit of sterilizers, incubators, and cultural apparatus.

Several of these laboratories possess full batteries of microscopes and microtomes, and are well equipped with all the extensive apparatus and appliances necessary in anatomical, physiological, histological, and embryological work.

The Library, the gift of Mr. Andrew Carnegie, is an imposing structure, exceptionally well adapted to the purposes for which it was built.

The Frank P. Brackett Observatory, the gift of Mr. Mellyn Bixby, '01, is designed throughout to be of service to the student in the direct study of the stars. It stands in a picturesque spot upon an elevation in Blanchard Park. Its equipment includes an equatorial telescope, with a Clark objective of six inches clear aperture, and a mounting, which includes driving clock and other modern conveniences, made by Wm. Gærtner of Chicago, a three-inch astronomical transit and chronograph, both made by the Gærtner Company, a standard Riefler clock for mean solar time, and a less expensive clock for sidereal time; also a horizontal telescope with a six-inch objective, having a focal length of forty feet.

and a cœlostat. In connection with this is employed a fourteen-foot spectrograph with a two-inch grating, loaned the Mt. Wilson Solar Observatory.

The Albert K. Smiley Hall is the dormitory for men. It has both single rooms and suites of three rooms, affording accommodations for eighty students.

Rembrandt Hall, the first section of the Art Building devoted chiefly to the work of the Department of Art. The upper floor contains studio and work rooms; the lower floor contains a convenient auditorium of moderate size for exhibits and assemblies.

The Mabel S. Bridges Hall of Music, the gift of Mr. and Mrs. Appleton S. Bridges, of San Diego, recently completed, offers opportunities for the study of music unexcelled in Southern California. Besides numerous studio and practice rooms equipped with Steinway pianos, it contains a large auditorium, a four manual pipe organ, a large practice organ and a two-manual pedal organ. The building is of reinforced concrete with Spanish tile roof.

The Renwick Gymnasium contains ample equipment for physical training, together with shower bath and locker facilities to make of the highest usefulness the swimming pool which adjoins it.

The Claremont Inn has, besides a large student dining room for the College Commons, accommodations for eight guests.

The Greek Theater, built to take advantage of the natural setting of Blanchard Park, though uncompleted, has at present a seating capacity of over 4000. Here the great Historical Pageant was given in 1913; here are given the seni plays, various concerts and entertainments; and here are held student rallies about bonfires built in the center space.

The Harwood Hall of Botany, the gift of Mr. A. P. Harwood, of Upland, erected in the summer of 1915, is a commodious building, containing lecture rooms and laboratories for the use of the Department of Botany. Adjoining it is the Agricultural and Botanical Laboratory, consisting of a greenhouse, a lath house and a central classroom.

The Marine Laboratory, located at Laguna Beach, has nine private rooms for special workers and two general laboratories, as well as storerooms, work rooms and aquarium room. The Barracks, a large and well-built structure, to become eventually a unit in the equipment for physical training. Various other smaller buildings add to the completeness of the College plant.

THE LIBRARY

The College possesses three library collections, the Cook-Baker Biological Library, the Astronomical Library, and the Main College Library. The main library is housed in the Carnegie Library Building, the Cook-Baker Library (Zoology section) in Pearsons Hall of Science and (Botany section) in Harwood Hall, and the Astronomical Collection in the F. P. Brackett Observatory. The two departmental libraries exist as independent collections but the intention is ultimately to have them all catalogued in the main library, though continuing as separate departmental collections.

The main library is a collection of solid working materials. Though not large it has been carefully selected and represents therefore a working library of exceptional value. Certain departments as English Literature, Economics, History, Geography, Biology, Education, Philosophy, and Psychology have moderate endowments and are therefore proportionately better supplied. Other departments have only small allotments out of general funds but are gradually being provided with endowments.

In connection with the main library there is a notable collection, the Mason California Collection, containing some of the most important works bearing on early California history.

The Library is also a depository for the publications of the Carnegie Institution of Washington, and for the United States Government documents.

June first, 1918, there were 29,806 bound volumes in the Library (not including the Astronomical collection) and 18,341 pamphlets. The report of 1917-1918 was the first to incorporate a separate count of pamphlets.

The majority of the best scholastic journals are to be found on the periodical shelves in the main library. In addition to these a large number of technical journals are received in exchange for the scientific publications of the College and are kept on file in the departmental libraries.

DEPARTMENTAL ORGANIZATIONS AND CLUBS

THE CHORAL UNION is an organization of students and members of the community for drill in choral work. It meets on Thursday evening for practice under the direction of the Department of Music, and twice each year gives a public concert.

THE POMONA COLLEGE Glee Club, the Pomona College Women's Glee Club, the Pomona College Orchestra, and the Pomona College Band are organizations under the general direction of the Department of Music.

THE REMBRANDT CLUB is an organization of students and members of the community which meets once a month for study, programs on art subjects, and social intercourse.

THE ASTRONOMICAL SOCIETY aims to help the observatory workers, in building up its library and in the issuing of its publications. The associate membership is drawn from the alumni and friends of the College, while the active membership includes the students of astronomy together with members of the faculty and resident graduates.

THE ZOOLOGICAL SEMINAR. The aim of the Zoological Seminar is chiefly the review and discussion of recent and important researches as published in the zoological journals. Membership is limited to students of the Junior and Senior classes chosen for excellent scholarship and marked interest in the work of the department, who meet every two weeks with the faculty of the Department of Zoology.

THE MATHEMATICAL SOCIETY. The Society of Pure and Applied Mathematics meets every month for presentation and discussion of results of study and investigation in the

physical sciences and mathematics. It is open to advanced students who are interested in these subjects and who agree to take an active part in its work.

THE LITERATURE SEMINAR. The purpose of the Literature Seminar is the presentation from a graduate or professional point of view of those masterpieces of literature which have dominated the content and form of other literature. Two sections devoted respectively to foreign language and English have recently been formed. The meetings are monthly and are open to students and community.

THE HISTORY SEMINAR consists of a student group organized to study special phases of contemporary history.

THE BOTANICAL SEMINAR is composed of those students in Botany who are interested in reviewing current literature and discussing botanical history and other phases of the subject not presented in the regular curriculum.

DER DEUTSCHE VEREIN is composed of those who have had at least three years of work in German. It meets every two weeks for the reading and discussing of papers in German and for other exercises which tend to cultivate fluency and accuracy in the use of the language.

LE CERCLE FRANCAIS, composed of students making a specialty of the French language, meets fortnightly for practice in French conversation, presentation of papers and discussion of topics relating to the various aspects of French life and literature.

EL CIRCULO ESPANOL, composed of students making a specialty of Spanish, meets fortnightly for practice in Spanish conversation and the presentation of appropriate papers in the language, bearing upon the literature and life of the Spanish world.

STUDENT ACTIVITIES

THE ASSOCIATED STUDENTS. This association harmonizes student activities. Its officers are chosen by the student body from their own number. All important questions are considered by its executive committee, which is composed of the most prominent in such varied lines as athletics, oratory, and editorship of the Student Life. This body has charge of inter-collegiate as well as inter-class relations.

MEN'S ORGANIZATION. The men of the student body form a voluntary organization, electing their own officers and committees and holding regular meetings. This organization controls largely the interclass and social relations of the men.

WOMEN'S ORGANIZATION. The women of the student body form a similar organization for considering and promoting the social relations of the women.

CHRISTIAN ASSOCIATIONS. Branches of the Young Men's Christian Association and the Young Women's Christian Association are well organized and doing effective work. Representation in the inter-collegiate and state conventions and the visits of active workers from outside serve to maintain interest in the work both at home and abroad. Through the co-operation of the associations and the College have been established, as a part of the curriculum, courses in Bible study adapted to all classes of students and conducted by members of the faculty.

THE POMONA COLLEGE LITERARY SOCIETY, composed of men and women, meets every two weeks. The work is varied in character, covering all literary lines.

THE POMONA COLLEGE DEBATING CLUB is composed of men and women. It meets every two weeks for prepared and impromptu debates on the live issues of the day.

THE ALPHA KAPPA is a society for women, giving drill in debates and familiarity with important current topics.

THE POMONA COLLEGE LYCEUM, composed of men, is a debating club, and meets bi-weekly.

THE AREOPAGUS is composed of men. The object of society is to promote efficiency in public speaking, debate, and parliamentary drill. Meetings are held every two weeks.

THE DELTA LAMBDA is a debating society for women meeting bi-weekly.

THE ADELPHI is a debating society for men which meets bi-weekly.

THE MASQUERS is an organization of students, whose purpose is the study and presentation of plays and the general promotion of the dramatic enterprises of the undergraduate body.

ATHLETICS. The immediate management of all contests and games rests with the Associated Students, though arrangements are under the supervision of a committee of the faculty and a student manager.

Alumni Field, consisting of about ten acres, has been developed by the alumni into athletic grounds unsurpassed in the Southwest in equipment and beauty of setting. First class tennis courts, an excellent track, baseball and football fields, also hockey and basket ball courts are within the limits of the campus, and athletic exercises and field sports are encouraged by the officers of the institution.

A swimming pool, of the standard size for water polo, and fully equipped with modern appliances, is open to all students. An invariable condition to the use of the pool is semi-annual medical examination.

Students are required to maintain a certain standard of excellence in all their studies in order to represent the College on any of its athletic teams or other organizations coming before the public.

PUBLICATIONS

The stated publications of the College are issued as numbers of the *Pomona College Bulletin*, which is published bi-monthly. These include:

The Annual Directory of Faculty and Students.

The Annual Catalog.

The Annual Register of Alumni.

The Annual Register of Faculty and Students.

The Annual Announcement of Courses.

Alumni and departmental publications are:

The Pomona College Quarterly Magazine, devoted to the interests of the College and Alumni.

The Journal of Entomology and Zoology, published under auspices of the Department of Zoology.

The Publication of the Astronomical Society of Pomona College, published under the auspices of the Department of Astronomy.

STUDENT PUBLICATIONS

The Student Life is published semi-weekly by the student body and is devoted to current affairs.

The Metate is published each year by the Junior class, and contains material appropriate to a college annual.

The Association Hand Book, which contains material of use, especially to new students, is issued at the beginning of year by the Christian Associations.

BUREAU OF APPOINTMENTS

A Bureau of Appointments is conducted in connection with the office of the Secretary of the Faculty for the benefit of members of the College who desire to teach after graduation. The purpose of the Bureau is to maintain a list of available positions and to recommend from the applicants registered those who are qualified for specific positions.

An opportunity is also offered graduates of the College who are already engaged in teaching, to register their present positions and to indicate whether they desire a change and so, under what conditions. An effort is made to further the desires of graduates so far as made known. The services of the Bureau are entirely gratuitous. Communications should be addressed to Professor M. E. Churchill, Secretary of Faculty.

THE ASSOCIATION OF COLLEGIATE ALUMNAE

The Association of Collegiate Alumnae organized in 1895 by prominent college women for the "maintenance of high standards of education," and including at the present time forty-five leading universities and colleges, received Pomona College to membership in July 1915. By this action women graduates of Pomona College are eligible for membership in any of the local branches of the Association, and for those who are not within reach of such branches there is a provision for a general membership. The general membership fee of one dollar may be sent to Mrs. Katharine P. Pomeroy, 944 Glengyle Place, Chicago, Ill., and entitles one to all membership privileges, including the Quarterly Journal.

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NOVEMBER, 1918

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rs (S. A. T. C. 11).....	84
omores (S. A. T. C. 34).....	134
men (S. A. T. C. 145).....	294
al Students (S. A. T. C. 45).....	53
al Music and Art Students.....	6
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lment in S. A. T. C.....	246

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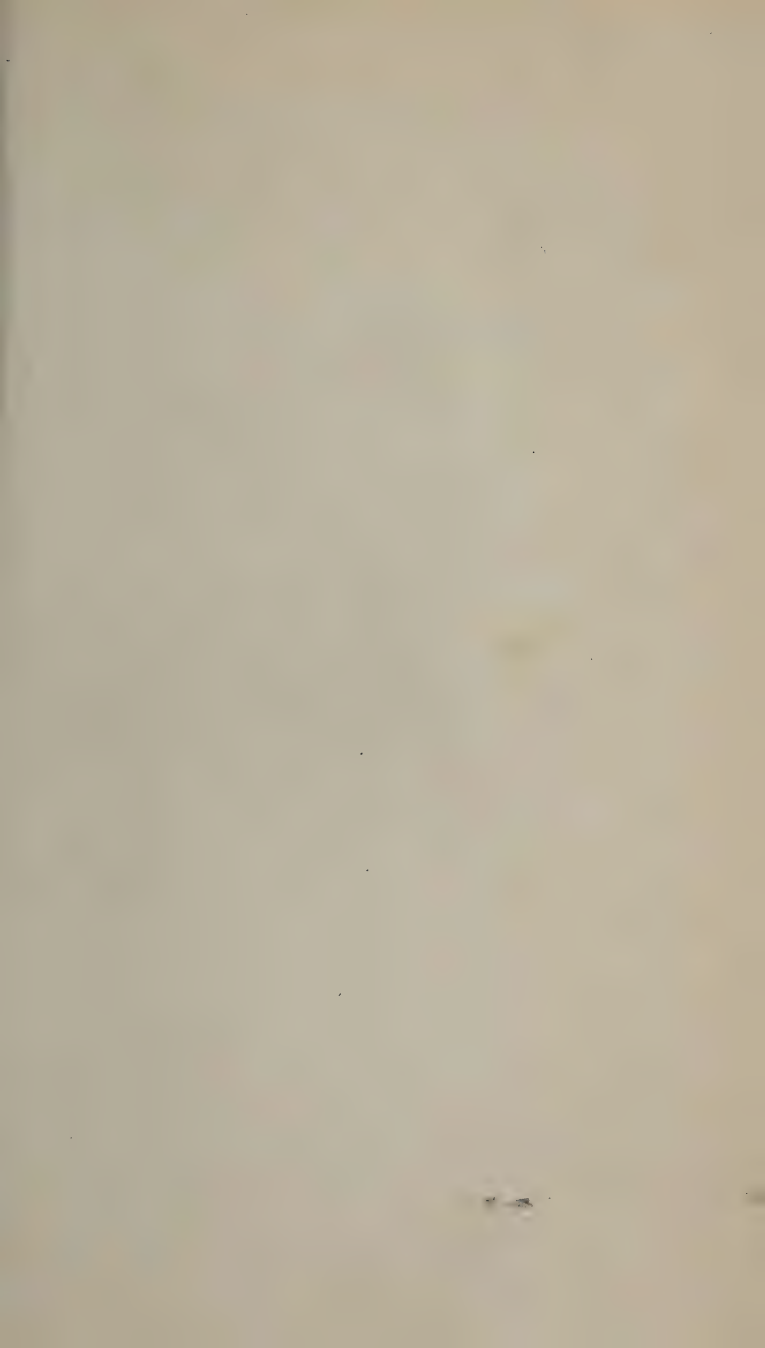
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Pomona College

ANNUAL CATALOG
1919—1920



CLAREMONT
CALIFORNIA



Thirty-second Year

Pomona College

ANNUAL CATALOG

Register of officers and teachers for the year
1919-1920; requirements for admission,
description of courses and general
information.

THE LIBRARY OF THE

MAY 3 1920

UNIVERSITY OF CALIFORNIA

November, 1919
CLAREMONT, CALIFORNIA
Published by the College

1919	1920	1920
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COLLEGE CALENDAR

1919

ember 22, Monday	{	Registration Days. Monday and Tuesday, examinations for entrance
ember 23, Tuesday		
ember 24, Wednesday		
ember 24, Wednesday		Convocation, 10:30 a. m.
ber 14, Tuesday		Founders Day
ember 27, Thursday		Thanksgiving Day
ember 20, Saturday		Christmas Recess begins, 12 m.

1920

ary 5, Monday		Christmas Recess ends, 10:30 a. m.
ary 26, Monday	{	Kinney Freshman Contest in Declamation, 8 p. m.
uary 2, Monday		
to		Mid-year Examinations
uary 7, Saturday		
uary 7, Saturday		First Semester ends
uary 9, Monday	{	Registration Days for Second Semester
uary 10, Tuesday		
uary 19, Thursday		Matriculation Day
uary 22, Sunday		Washington's Birthday
h 27, Saturday		Spring Recess begins, 12:00 m.
l 5, Monday		Spring Recess ends, 10:30 a. m.
30, Sunday		Memorial Day
11, Friday	{	Final Examinations
to		
17, Thursday		
21, Monday		Commencement

SUMMER VACATION

ember 20, Monday	{	Registration Days. Monday and Tuesday, examinations for entrance
ember 21, Tuesday		
ember 22, Wednesday		
ember, 22, Wednesday		Convocation, 10:30 a. m.

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HISTORICAL SKETCH

The history of the development of Southern California from a land sparsely inhabited and apparently fit only for a cattle range, into a genuine American commonwealth with a multitude of prosperous communities, covers hardly forty years; but this brief span of time has been a period of intense activity and remarkable growth. This epoch of swift progress was inaugurated by the completion of a second transcontinental railway, in this case piercing Southern California directly from the East, together with the sudden awakening to a realization of the great agricultural possibilities of the section through irrigation. A large immigration and a rapid increase in land values were at once induced. New towns sprang up almost in a day and great industrial projects characteristic of such a period were at once inaugurated.

While the commercial and speculative interests were continuously in evidence there were among the new settlers, nevertheless, many whose chief concern was for the higher qualities of life and character. Not least among these were those whose former affiliations had been with New England and its institutions. The Southern California District Association of Congregational Churches, meeting at San Bernardino in 1882, agitated the question of founding a college of New England type. In 1886 the Association met at Redlands (now Redlands), when the report of the educational committee was an earnest appeal for such a college. At this meeting a larger educational committee than usual was appointed and was instructed to view locations and make proposals of aid toward establishing a "Christian College of the New England Type." In accordance with these instructions the committee visited various places from which

they had received offers of aid and gave the matter serious and careful consideration.

In May, 1887, the District Association met in Los Angeles and became the General Association of Southern California. This General Association immediately gave full powers to its committee of education, not only to select the College site, but to appoint trustees for the prospective institution. Fifteen trustees, two of whom are still members of the board, were duly appointed; the College was incorporated October 14, 1887, under the name of The Pomona College, and a site was selected about four miles north of the center of Pomona.

For the immediate needs of the College a small private house was rented in Pomona, and in it the work of instruction was begun in September, 1888. In the following January an unfinished hotel in Claremont (now Sumner Hotel) together with considerable land adjacent, was given to the College and the work was transferred to that place. It was originally supposed that this location would be temporary, the name of the College was therefore retained in the expectation that ultimately the site originally selected would be used. Later this plan was abandoned and Claremont was made the permanent seat of the College. By this time, however, the name of "Pomona College" had become so definitely fixed that it has been retained, notwithstanding the change of location.

The growth of the College has been swift and constant. The first class was graduated in 1894, at which time the total number of college students was forty-seven. For some time the work of the Preparatory School was of large importance, but later on this was discontinued owing to the increasing growth and importance of the College. In 1915 the College had become so large as to compel at least a temporary lin-

in the number of its students, the maximum of the Freshman Class being placed at two hundred, one hundred and one hundred women. The original campus of about five acres has been enlarged by purchase and by gifts and it now comprises one hundred acres; and this area, together with its buildings, is being developed according to a carefully worked out by competent landscape gardeners and architects, the whole growth being in accord with a harmonious plan. All this rapid progress of the institution has been made possible by a most generous company of friends who have responded nobly to the calls of higher Christian education and to the needs of young people. From the very beginning the institution has been the creation of faith, affection and idealism. To a remarkable degree the College has been made possible by a great democracy of un-mind-ed givers, and the character of these benefactors reflected in the daily life and procedure of the College.

While the College was originally Congregational in organization, it long ago made itself the servant of a wider fellowship. The Board of Trustees is a self-perpetuating body, absolutely free from ecclesiastical control and representing divergent communions, but obliged, nevertheless, by the College Charter to maintain the institution as truly Christian, though unsectarian. From the first it has been the policy of all concerned in the administration of the institution to maintain a high standard of college life and work, and to place the emphasis upon quality in the development of strong and serviceable Christian manhood and womanhood. Thus the purpose for which the College was founded is expressed in its motto, "Our Tribute to Christian Civilization."

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 CHARLES E. HARWOOD, LL.D.
 FRANK H. HARWOOD
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 W. H. R. WELDON
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JAMES A. BLAISDELL

JAMES P. JAMIESON
ROBERT H. ORR

} Architects

*In conjunction with a committee of the Faculty.

FACULTY

JAMES ARNOLD BLAISDELL

345 College A

*President, 1910**

B.A., Beloit College; M.A., Beloit College; D.D., Beloit College. Graduate Student, Hartford Theological Seminary.

CYRUS GRANDISON BALDWIN

Palo A

President Emeritus, 1890

B.A., Oberlin College; M.A., Oberlin College; Student, Andover Theological Seminary; D.D., Oberlin College.

EDWIN CLARENCE NORTON

137 W. Seventh S

Dean of the Faculty and Professor of the Greek Language and Literature on the Edwin Clarence Norton Foundation, 1888

B.A., Amherst College; M.A., Amherst College and Yale University; Ph.D., Carleton College; D.D., Pacific Theological Seminary. Graduate Student, Johns Hopkins, Columbia and Oxford Universities.

FRANK PARKHURST BRACKETT

270 E. Third S

Professor of Mathematics on the Frank Parkhurst Brackett Foundation and Director of the Observatory, 1888

B.A., Dartmouth College; M.A., Dartmouth College. Honorary Fellow, Clark University.

PHEBE ESTELLE SPALDING

261 W. Fifth S

Professor of English Literature on the Phebe Estelle Spalding Foundation, 1889

B.L., Carleton College; M.L., Carleton College; Ph.D., Boston University

DANIEL HERBERT COLCORD

157 E. Seventh S

Professor of the Latin Language and Literature, 1890

B.A., Amherst College; M.A., Amherst College; B.D., Andover Theological Seminary. Graduate Student, Harvard University.

ARTHUR DART BISSELL†

319 Harvard Av

Professor of German, 1892

B.A., Amherst College; M. A., Amherst College; B.D., Yale University Graduate Student, Yale University and University of Leipzig.

GEORGE GALE HITCHCOCK

721 College Av

Professor of Physics, 1892

B. A., University of Nebraska. Graduate Student, Johns Hopkins and Cornell Universities.

*The date in each case denotes the beginning of original term of service.
†Absent on leave, 1919-1920.

FACULTY

15

- RGE STEDMAN SUMNER** 105 College Ave.
Professor of Economics and Sociology on the Stedman-Sumner Foundation, 1897
 B.A., Pomona College; B. A., Yale University; Ph.D., Yale University.
- ARLES CUMMINGS STEARNS** 146 E. Tenth St.
Professor of Biblical History and Literature on the Nancy M. Lyon Foundation, 1906
 B. A., Yale University; M. A., Yale University; B.D., Union Theological Seminary. Graduate Student, University of Berlin.
- CE ELLA BERRY** Sumner Hall
Dean of Women and Assistant Professor of Mathematics, 1909
 B.S., Mount Holyoke College; M. A., Mount Holyoke College.
- ES ALEXANDER LYMAN** 833 Indian Hill Blvd.
Professor of Chemistry, 1909
 B. A., Beloit College; M. A., Beloit College; Ph.D., Johns Hopkins University. Graduate Student, University of Chicago.
- TON ERASTUS CHURCHILL** 507 Yale Ave.
Secretary of the Faculty and Associate Professor of German, 1902
 B. A., Knox College; M. A., Knox College, Litt.D., Knox College; B.D., Yale University. Graduate Student, University of Leipzig.
- NDAL GARBUTT FRAMPTON** 927 Harvard Ave.
Professor of the English Language, 1904
 B. A., Illinois College; M.A., Illinois College; M.A., Harvard University. Graduate Student, Harvard and Chicago Universities.
- ARLES GRACCHUS NEELY** 739 College Ave.
Professor of Constitutional History and Law, 1911
 B.L., University of Illinois.
- LLIAM ATWOOD HILTON¹** 1264 Dartmouth Ave.
Professor of Zoology on the Willard George Halstead Foundation, 1905
 B.S., Cornell University; Ph.D., Cornell University.
- RNARD CAPEN EWER** 339 Yale Ave.
Professor of Psychology, 1916
 B.A., Brown University; M.A., Brown University; Ph.D., Harvard University.
- LPH HAINE LYMAN** 357 W. Tenth St.
Professor of Applied Music and Instructor in Singing, Head of Department of Music, 1917
 B.A., Grinnell College. Student in voice with Karleton Hackett, William B. Olds, Grant Hadley, Arthur Middleton, Courtland Cooper, Holmes Cowper and other American masters, and with Vittorino Moratti in Berlin.

¹Absent on leave, first semester, 1919-1920.

MARO BEATH JONES

428 Yale A

Professor of Romance Languages, 1911

B. A., Boston University; M.A., Boston University; Graduate Student, Universities of Chicago, Geneva and Barcelona. Student, Estudis Universitaris Catalans, Barcelona.

ROBERT DAY WILLIAMS

630 Harvard A

Acting Professor of Philosophy, 1909

B. S., Pomona College; M. A., Yale University; Ph.D., Yale University; Graduate Student, University of California.

WILLIAM POLK RUSSELL

506 E. Sixth

Associate Professor of Mathematics on the Joseph W. Fiske Foundation, 1904

B.A., Cumberland University; M.A., Cumberland University. Graduate Student, Columbia and Yale Universities.

ARTHUR VOLNEY STOUGHTON

146 W. Seventh

Associate Professor of Physiology and Hygiene, and College Physician, 1911

B.A., Pomona College; M.D., Ohio Medical University. Graduate Student, Medical Department of Johns Hopkins University and Medical School, Harvard University. Student, Laboratories of Friedrichshain Krankenhaus and Private Laboratory of Professor Pick, Berlin. Resident physician, Protestant Hospital, Columbus, O.

WALDEMAR CHRISTIAN WESTERGAARD

135 E. Ninth S

Associate Professor of History on the Warren F. Day Foundation, 1916

B. A., University of North Dakota; M.L., University of California; Ph.D., University of California. Fellow in History, Cornell University.

HANNAH TEMPEST JENKINS

Claremont I

Associate Professor of Art and Design, 1905

Graduate Teachers College, Columbia University. Student Philadelphia Academy of Fine Arts. Pupil of Jean Paul Laurens, Constant and Pierre in figure and portrait, of Henry Thompson in landscape, and Wm. M. Chase, Robert Vonnoh and Cecilia Beaux in portrait. Painter, Salonist, 1889.

EDWARD PAYSON BARTLETT

135 E. Ninth S

Associate Professor of Chemistry, 1909

B.A., Dartmouth College; M. A., Harvard University; Ph.D., Harvard University; Graduate Student, Columbia University.

VICTOR EDWARD MARRIOTT

116 Twelfth S

Librarian, 1912

B.A., Beloit College; M.A., University of California. Graduate Student, Yale University.

WALTER EARLE HARTLEY

127 W. Eighth S

Associate Professor of Organ and Piano, 1915

B.A., Yale University; B.Mus., Yale University. Associate, American Guild of Organists. Pupil of Widor, in Organ and Composition, and of Stubbs.

FACULTY

17

LIAM EVAN NICHOLL 307 W. Sixth St.
Dean of the College and Assistant Professor of Education, 1919
 B.A., Bellevue College; M.A., Teachers' College, Columbia University.
 Graduate Student, Edinburgh University.

ERT TRESILIAN BELCHER 169 W. Sixth St.
Assistant Professor of Mathematics and Engineering, 1907
 B. A., Queen's University. Graduate Student, Queen's College and University of California.

TER ALFRED ALLEN 131 E. Tenth St.
*Assistant Professor of Musical Theory and Appreciation,
 and Instructor in Organ, 1912*
 B.A., Beloit College; B.Mus., Yale University; Associate, American Guild of Organists.

RA CHARLTON SQUIRE 248 W. Seventh St.
Assistant Professor of Physical Education for Women, 1910
 B.A., Pomona College. Graduate Student, University of California and Wellesley College.

LIAM SHEFFIELD AMENT 1130 Harvard Ave.
Assistant Professor of English, 1912
 B.A., Oberlin College; M.A., Harvard University. Graduate Student, Columbia University.

LIAM HOLLAND MATLOCK 642 College Ave.
Assistant Professor of German, 1913
 Ph.B., Drake University. Graduate Student, Goettingen, Heidelberg and Munich, the Sorbonne and College of France.

ER ELMER ROBBINS 487 Harrison Ave.
Assistant Professor of Ancient Languages, 1915
 B.A., University of Michigan; M.A., University of Michigan; Ph.D., University of Michigan. Graduate Student and holder of University and Buhl Classical Fellowships, University of Michigan.

L PETER SCHOTT 725 Harvard Ave.
Assistant Professor of Physical Education for Men, 1916
 B.E., Nebraska State Normal School; B.P.E., Young Men's Christian Association College, Springfield, Massachusetts. Graduate Student, Purdue University.

EENE WHITE NIXON 124 E. Third St.
Assistant Professor of Physical Training for Men, 1916
 B.A., Monmouth College. Graduate Student, University of Illinois.

ELIP ALEXANDER MUNZ Smiley Hall
Assistant Professor of Botany, 1917
 B.A., University of Denver; M.A., University of Denver; Ph.D., Cornell University.

- AMANDUS ZOELLNER 248 E. Second
Assistant Professor of Violin, 1918
- GEORGE SAMUEL BURGESS Claremont
Assistant Professor of Political Economy, 1918
B.A., University of Michigan; J.D., University of Michigan.
- FRANK DAVID THOMSON 338 Harvard A
Assistant Professor of Accounting and Commercial Subjects, 1918
B.A., Knox College; M.A., Knox College; Graduate Student, Johns Hopkins University.
- REXFORD DAVIS COLBURN 346 Yale A
Assistant Professor of Piano, 1919
B.Mus., Syracuse University. Graduate Student, Syracuse University.
- CHARLES TABOR FITTS Claremont I
Assistant Professor of English, 1919
B.A., Amherst College. Graduate Student, University of California.
- CLIFFORD NOTT HAND 1122 College A
Director of Religious Interests, 1919
B.L., Pomona College; B.D., Pacific School of Religion.
- REGINALD POLE Los Angeles
Director of Dramatics, 1916
B.A., Cambridge University.
- MABLE CLAIR WEST 1016 Columbia A
Instructor in Piano, 1905
B.S., Pomona College. Graduate Student, Peabody Conservatory Music, Baltimore.
- HARRIET PASMORE 132 E. Second
Instructor in Singing, 1914
B.A., University of California. Graduate Student, University of California.
- ALFRED OSWALD WOODFORD¹ 639 Yale A
Instructor in Chemistry and Geology, 1915
B.A., Pomona College. Graduate Student, University of California.
- HELEN FELICITAS HAURY 272 W. Seventh S
Instructor in Chemistry, 1918
B.A., Pomona College. Graduate Student, Columbia University and University of California.
- MARJORIE DAYTON HITCHCOCK 157 W. Seventh S
Instructor in English, 1918
B.A., Pomona College

¹Absent on leave, 1919-1920.

FACULTY

19

- HENCE DODGE RUSSELL 362 Mills Ave.
Instructor in Piano, 1918
 B.A., Pomona College. Graduate Student, Pomona College.
- THOMAS McPHERSON GOODRICH 407 Harvard Ave.
Instructor in Physical Education for Women, 1918
 B.A., Pomona College.
- MARGARET GAYLORD 325 W. Sixth St.
Instructor in Romance Languages
 B.A., Pomona College.
- MARY HERINE M. HEACOX
Instructor in Romance Languages
 B.A., Oberlin College.
- CLARA MOZELLE ANDERSON Claremont Inn
Instructor in Romance Languages
 B.A., Colorado College. Graduate Student, University of California.

ADMINISTRATIVE OFFICERS OF THE FACULTY

- JAMES ARNOLD BLAISDELL, D.D. President's Rooms, Library
President
- WINSTON CLARENCE NORTON, PH.D. Room 3, Holmes Hall
Dean of the Faculty
- WILLIAM EVAN NICHOLL, M.A. Room 9, Holmes Hall
Dean of the College
- MRS. ELLA BERRY, M.A. Sumner Hall
Dean of Women
- ELLIOT ERASTUS CHURCHILL, LITT.D. Room 53, Library
Secretary of the Faculty
- FRANK PARKHURST BRACKETT, M.A. The Observatory
Director of the Observatory
- HENDAL GARBUIT FRAMPTON, M.A. Rooms 7 and 8, Holmes Hall
Acting Registrar
- LECTURER EDWARD MARRIOTT, M.A. Library
Librarian
- CHARLES BERARD VOGDES, MAJOR, U.S.A., RETIRED Claremont Inn
Commanding Officer Reserve Officers' Training Corps

HOMER ELMER ROBBINS, PH.D. Room 10, Holmes I
Chairman of Committee on Admission

MARION JEANETTE EWING, B.A., B.S. Libr
Assistant Librarian

FLORENCE MARIE FOX¹ Room 6, Holmes I
Assistant Registrar

GEORGIA GRACE THOMAS Room 53, Libr
Assistant Secretary of the Faculty

ROBERT JAMES BERNARD, B.A. President's Rooms, Libr
Assistant to the President

VIRGINIA DEARBORN, B.A. President's Rooms, Libr
Secretary to the Administration

¹Resigned Nov. 1, 1919.

CLASS OFFICERS

GENERAL—Professors Brackett and Nicholl

SENIOR—Professors Brackett and Burgess

JUNIOR—Professors Williams and Matlock

SOPHOMORE—Professors Sumner and Squire

FRESHMAN—Professors Robbins and Berry

OTHER OFFICERS

ERNEST EVERETT JONES, B.S. 119 College Av
Business Manager

WILLIAM JEWETT HOWARD 1131 Harvard Av
Assistant Business Manager

MARY LOUISE BILLINGS 541 Harvard Av
Accountant

GRETCHEN HIGBEE 319 W. Sixth S
Assistant to the Business Manager

SARAH LOUISE JEWELL Sumner Ha
Matron of Sumner Hall

FACULTY

21

- LOUIS D. HILLHOUSE Smiley Hall
College Hostess
- ELEANOR PECK 140 Mesa Ave.
Assistant to the Chairman of Committee on Admission
- EST GLENN HUTCHISON Fifth St. and Cucamonga Ave., Ontario
Superintendent of Grounds
- L MAURITZ CARLSON 922 Columbia Ave.
Superintendent of Buildings

COMMITTEES OF THE FACULTY

WITH PLACE AND TIME OF MEETING

ADMISSION—Messrs. Robbins, Frampton, Miss Berry. Room 10.
 On call.

BUILDINGS AND GROUNDS—(In conjunction with a committee of
 Board of Trustees)—Messrs. Stearns, Hitchcock, Belcher.
 Room 4. On call.

CLASSIFICATION—Messrs. Frampton, Sumner, Miss Berry, Messrs.
 Bartlett, Robbins, Nicholl. Room 7. 3:15 p. m., Friday.

COLLEGE LIFE—Messrs. Norton, Brackett, Miss Berry, Messrs.
 Archiball, Ewer, R. H. Lyman, Robbins, Schott, Nicholl, Burgess,
 Squire. Room 3. 1:15 p. m., Thursday.

COURSES OF STUDY—Messrs. Sumner, Frampton, Jones, Munz,
 Stergaard. Room 14. 10:30 a. m., Tuesday.

EDUCATIONAL EFFICIENCY—Messrs. Brackett, Hitchcock, J. A.
 Hannan, Frampton, Marriott, Hartley, Hand, Matlock. Room 51.
 On call, 1:15 p. m.

FACULTY MEETINGS—Miss Berry, Messrs. Williams, Marriott.
 Sumner Hall. 10:30 a. m., Saturday.

FEDERATED CLUBS—Messrs. Jones, Brackett, Nicholl, Hilton. Room
 On call.

GRADUATE WORK—Messrs. Bartlett, Williams, Hitchcock. On call.

LIBRARY—Miss Spalding, Messrs. Marriott, Stoughton, Wester-
 ard, Burgess, Miss Ewing. On call.

PHYSICAL EDUCATION—Messrs. Russell, Stoughton, Schott, Nixon, Miss Squire, Mr. Ament. Room 2. 10:30 a.m., alternate Thursdays.

PUBLICATIONS—Messrs. Churchill, Thomson, Hilton, Ament, Bernard. Room 53. On call.

PUBLIC EVENTS AND LECTURES—Messrs Churchill, R. H. Lyman, Allen, Schott, with Business Manager Jones. Room 53. On call.

RELIGIOUS INTERESTS—Messrs. Marriott, Neely, Hand, Robbins, Miss Ewing, Mr. Bernard. Room 2. 9:30 a.m., Monday.

ROOMS—Messrs. Sumner, Churchill, Nicholl. Room 14. On call.

RULES—Mr. Nicholl, Miss Berry, Messrs. Churchill, Frampton. Room 9. On call.

STUDENT AID AND LABOR—Messrs. Robbins, Marriott, Hand, Miss Berry. Room 10. On call.

SUMMER SCHOOL—Messrs. Russell, Hilton, J. A. Lyman. On call.

CHARACTER OF THE COLLEGE

Pomona College is located at Claremont, on the Santa and Pacific Electric Railways, thirty-five miles from Los Angeles. It is connected by the Pacific Electric Railway to Pomona, which is four miles distant, on the Salt Lake and the Southern Pacific roads. On the rim of an orchard-bordered valley, which is hemmed in on all sides by lofty mountains, and with Mt. San Antonio in the immediate background rising to the height of ten thousand feet, its location is one of rare beauty. The genial southern climate invites to outdoor life and exercise the year around, while the deep canyons, the rushing streams and the long trails of the heart of the hills allure to the rewarding intimacies of nature. The town of Claremont, which now numbers about eighteen hundred inhabitants, owes its existence to the College, and has the attractive features of the typical college community. The location and situation, within easy reach of the great and growing metropolis of the South-west, and yet in the quiet retirement of valley and hill, is equally wholesome and stimulating in full measure to the simplicity and thoughtfulness and all the best enthusiasms which life is capable of.

The College is pre-eminently a company of workers. From its very beginning it has maintained a reputation for interest in thorough scholarship rather than in large numbers. The procedures of the College are established in the purpose of appealing to students who appreciate the seriousness of the college opportunity. To this end, the standards of admission are unusually high. Not only is the number limited, but as defined elsewhere, only students who have finished their preparation with a high grade of promise are received. It is the distinct purpose to make the membership of the institution itself a scholastic honor. This inevitably

involves a sacrifice of certain values which would be temporarily pleasurable but which are not consistent with most remunerative purposes.

It is the habit of the College to urge that scholars should not only be high but also broad and inclusive. Pomona College is not a professional school. It insists that the best preparation for life includes not only the ample and generous and complete training of the college course, such as is here given, but also at a later period a thorough and definite professional specialization. It has further insisted that this best and most complete training was practicable for a much larger number of young people than commonly find that they have the resources of time and money for it. The College is eager to co-operate in the problems of such aspiring students; it has also been singularly successful in permeating its body of students with these ambitions, and the remarkable success of its graduates is due in no small degree to the fact that nearly seventy per cent of all who have graduated have taken subsequent professional training.

To the end that the College may be adequate for the broadest intellectual citizenship and service, a certain number of courses representing typically the differentiated fields of knowledge and investigation are required, and particular emphasis is laid upon those topics which relate to the history of thought, the organization of society and the bases of truth and righteousness. These courses are required of all, whether staying a longer or a shorter time in the institution, as being important to the main purpose for which the College exists. While these few courses are required, there is around them ample field for selection, according to the student's individual interest and purpose.

The College recognizes the fact that social training is also an essential part of education. It is believed that the co-ed-

nal character of the College greatly increases the culture of the student body in this respect. Working together on the highest levels of life, men and women are most likely to live in mutual respect and dignity. It is practically the unanimous testimony of the graduates of this college that the relations add to the genuine wholesomeness and added worth of the student's life. While emphasizing the values and opportunities, the College, however, recognizes them as interests which must be held subordinate to the main business of study and work. For this reason limitations which sometimes may seem narrow are laid upon the life of the college community. Fraternities and sororities in the ordinary acceptance of these terms, and extra-collegiate social life, do not exist at Pomona College, and no one would seek the institution who is not willing to make sacrifice of some personal pleasures in the interests of the college earnestness and simplicity.

In addition more; the College is frankly Christian. It owes its existence and support to men and women of Christian ideals; it cannot, therefore, be other than loyal to these interests. Instead of maintaining a separate Christian life, the College urgently lays upon its students the obligation of allegiance to that wider democracy of service and uplift which is represented in the Christian Church. The College is, nevertheless, emphatically broad in its hospitality to modern thought. It holds that no student should go out of the College unaware of the throbbing questions of the day or unprepared to face the winds of free discussion; therefore, it welcomes all honest expression of opinion, putting faith in the power of truth to hold its own in the arena of open debate. It seeks to resource the coming generation with a leadership of intellectual capacity, directed will and Christian character.

DEGREES

BACHELOR OF ARTS

The courses of study offered by the College lead to the degree of Bachelor of Arts. These courses include the required studies, but also a wide range of electives in language and literature, philosophy, economics, history, mathematics, science and fine arts. An average of fifteen hours of academic work per semester throughout the four years is required for the completion of the courses. A detailed statement of the curriculum will be found on page 37.

COURSES WITHOUT DEGREES

Mature students, ordinarily only such as are at least twenty-one years of age, may be admitted as special students to courses for which by ability and preparation they are fitted. Special students are not candidates for a degree, though completion of the prescribed courses in Music or Art entitles the student to receive the special State Teacher's Certificate upon the recommendation of the College.

MASTER OF ARTS

In a few departments, where the facilities of the College warrant, limited numbers of students, whose undergraduate records show marked excellence, are accepted as candidates for the Master's degree. Only those are admitted who give promise of contributing a definite and inspiring influence to the life of the College. Such residence is then required as is deemed necessary to insure mutually helpful relations. A further statement of requirements will be found on page 41.

ADMISSION

GENERAL REQUIREMENTS AND METHODS OF ADMISSION

the purpose of Pomona College to do a distinctly and
y high grade of work, thus preparing its graduates for
distinction in whatever later callings they may choose.
is end candidates for admission to any class must
t satisfactory evidence of their fitness for college, both
racter and in scholarship. Testimonials of character
letter of honorable dismissal from the last institution
ed are required. As all applications for admission are
lly scrutinized, delay in filing applications inevitably
es delay in acceptance.

further advised that applications be made as early
sible, inasmuch as the College cannot under present
ons guarantee the admission of more than one hun-
nd fifteen men and one hundred and fifteen women
freshman class, the trustees having limited the total
ance to seven hundred.

College welcomes tentative applications from pros-
e freshmen several years in advance and is glad to offer
tions from time to time regarding the best preparation
mission. In this respect the good offices of the Col-
re freely at the service of all interested inquirers. A
al examination conducted by an authorized physician,
the direction of the Department of Physical Educa-
s required of all students.

ADMISSION TO FRESHMAN STANDING

licants are admitted to freshman standing in any one
e ways, as follows:

t: Examination by the College.

Second: Certificate of the College Entrance Examination Board.

Examinations are given by the College Entrance Examination Board at certain times and places, which may be learned from the Registrar or from principals of secondary schools.

Third: Certificate from approved schools or colleges.

Students from approved schools or colleges are admitted without examination on presentation of a certificate signed by the principal or proper official and showing in detail the requisite completed courses. Certificate blanks obtained from the Chairman of the Committee on Admission should be filled out and returned as early as possible after the completion of the high school year.

As the number of students admitted to the freshman class is limited, early application is advised. Applications are listed in the order of their receipt, are considered individually, and in every case must be accompanied by a certificate both as to scholarship and character. No application is considered which does not show fifteen units in accepted subjects, at least twelve of which are recommended. Special endorsement by the principal must accompany all papers showing non-commended units, such endorsement to include the specific recommendation of the candidate, both as to character and ability, for the undertaking of college work.

Those are matriculated to full standing who at the end of the first semester's residence meet the requirements stated on page 122; those who do not meet the requirements are not allowed to matriculate and are enrolled as in partial standing. No student in partial standing is recommended for college standing in another institution. The final acceptance of entrance units is based upon the character of the work done in class at Pomona College as well as upon the grade of the units presented.

ADMISSION TO ADVANCED STANDING

Students who have sufficient credit from other institutions are admitted to advanced standing on credentials signed by proper officials and giving full specifications concerning nature of the courses taken and the time spent in each, together with their rank in each subject. They are assigned courses and credits on the basis of their credentials, but such assignment is provisional until ratified by the Classification Committee. This ratification is not given until after the required semester's residence, at which time the Committee has power to act in adjusting hours or credits, or both, to the qualifications shown.

ADMISSION AS SPECIAL STUDENTS

Mature students, ordinarily only such as are at least twenty-one years of age, may be admitted as special students for courses for which, by ability and preparation, they may be qualified. This provision applies particularly to those equipped for advanced studies in special departments. The privilege of classification as special students is not open to those who seek admission to College in this way as a means of avoiding compliance with the entrance or collegiate requirements laid down for regular students. Special students are not candidates for a degree.

CREDITS FOR NON-COMMENDED WORK

Students who enter with some of their work non-commended may remove their deficiency in one of three ways—by examination, by continuing the same line of study in College with high grade or by extra work in College not counted towards a degree. These three methods are more fully described as follows:

First: Students may be examined upon any of the accepted subjects presented for entrance, and upon passing in B grade receive credit toward entrance for that subject.

Students wishing to remove deficiencies by examination must do so before entering upon College work. Such examinations must be taken during the first three days of registration week of either semester or (by special arrangement) a week preceding the College commencement. They must be arranged for in advance through the Registrar.

Second: Entrance credit will be given for non-commended work after a student has completed with high grade two or more College courses in the same or a closely allied subject, or upon conditions laid down in individual cases by the Classification Committee.

Third: Entrance credit may be gained by work in certain College courses, but such courses cannot count toward the number of hours or credits required for graduation, nor for honors. Moreover, students may not substitute for subjects specifically required for entrance other subjects taken in the same way.

Students are not candidates for a degree nor are they eligible for recommendation to college standing in another institution until they have been matriculated. (See page 122) Students are matriculated only after they have come into freshman standing. All students must be matriculated before attaining to Junior standing.

COURSES REQUIRED FOR ADMISSION TO FRESHMAN STANDING

In the following outline of courses a "unit" represents a course of study in one subject of high school grade involving five forty-five minute recitations per week or an equivalent for a school year. Laboratory periods should be at least twice the length of recitation periods.

Not less than one unit in any subject is normally accepted

ough a half unit may be accepted when accompanied by
ts for courses in allied subjects.

SPECIFIC REQUIREMENTS—8 UNITS

English, 2 units	Algebra, 1 unit
History, 1 unit	Geometry, 1 unit
A foreign language, units	*One laboratory science, 1 unit.

ADDITIONAL REQUIREMENTS—4 UNITS

ected from the following:

English	Mathematics
History	*Laboratory Science
Foreign Language	

ELECTIVE—3 UNITS

is recommended that these electives be chosen from the sub-
s specified above, but in view of the importance of other lines
high school work credit is allowed for full units in other courses
nted for high school graduation, the acceptance of which is
pecifically recommended by the principal of the school.

DESCRIPTION OF SUBJECTS

The College recommends that the work offered to meet the
uirements above shall cover the ground indicated in
e following description of courses. Each course consti-
es one unit unless otherwise designated.

ENGLISH

Elementary composition and literature. (2 units.)
Intermediate.
Advanced.

*Heads of departments in which students wish to continue laboratory
ects begun in high school may, at their option, require the high school note-
ks to be submitted as evidence of ability to continue with more advanced
k in the department.

The following list* is made the basis of examination. indicates books selected for careful reading; B those requiring close study.

A. READING—From each of the following groups at least two selections are to be made, except as otherwise provided under Group I.

GROUP I. CLASSICS IN TRANSLATION.—The Old Testament, comprising at least the chief narrative episodes in Genesis, Exodus, Joshua, Judges, Samuel, Kings, and Daniel, together with the books of Ruth and Esther; the Odyssey, with the omission, if desired, of Books I-V and XV-XVII; the Iliad, with the omission, if desired, of Books XI, XIII-XV, XVII, and XXI; the Aeneid. The Aeneid, the Odyssey and the Iliad should be read in English translation of recognized literary excellence.

For any selection from this group a selection from any other group may be substituted.

GROUP II. SHAKESPEARE.—*Midsummer Night's Dream*; *Merchant of Venice*; *As You Like It*; *Twelfth Night*; *The Tempest*; *Romeo and Juliet*; *King John*; *Richard II*; *Richard III*; *Henry V*; *Coriolanus*, and the following (if not chosen for study under B), *Julius Caesar*; *Macbeth*; *Hamlet*.

GROUP III. PROSE FICTION.—Malory's *Morte d'Arthur* (about 100 pages); Bunyan's *Pilgrim's Progress*, Part I; Swift's *Gulliver's Travels* (voyages to Lilliput and to Brobdingnag); Defoe's *Robinson Crusoe*, Part I; Goldsmith's *Vicar of Wakefield*; Frances Burney's *Evelina*; Scott's Novels, any one; Jane Austen's Novels, any one; Maria Edgeworth's *Castle Rackrent*, or *The Absentee*; Dickens's Novels, any one; Thackeray's Novels, any one; George Eliot's Novels, any one; Mrs. Gaskell's *Cranford*; Kingsley's *Westward Ho!* or *Hereward, the Wake*; Reade's *The Cloister and the Hearth*; Blackmore's *Lorna Doone*; Hughes' *Tom Brown's School-days*; Stevenson's *Treasure Island*, or *Kidnapped*, or *Master of Ballantrae*; Cooper's Novels, any one; Poe's *Selected Tales*; Hawthorne's *The House of the Seven Gables*, or *Twice-Told Tales*, or *Mosses from an Old Manse*; a collection of *Short Stories* by various standard writers.

*Recommended by the National Conference on Uniform Entrance Requirements in English for 1915-1919.

GROUP IV. ESSAYS, BIOGRAPHY, ETC.—Addison and Steele's *The Tatler* and *The Spectator* (about 200 pages); Boswell's *Life of Johnson* (about 200 pages); Franklin's *Autobiography*; Irving's *Sketch Book* (about 200 pages), or *Life of Goldsmith*; Southey's *Life of Nelson*; Lamb's *Essays of Elia* (about 100 pages); Lockhart's *Life of Scott* (about 200 pages); Thackeray's *Lectures on Literature*; Addison, and Steele in the *English Humorists*; Macaulay's *Life of Clive*, *Warren Hastings*, *Milton*, *Addison*, *Goldsmith*, *Frederick the Great*, *Madame d'Arblay* (any one); Trevelyan's *Life of Macaulay* (about 200 pages); Ruskin's *Sesame and Lilies*, or *Selections* (about 150 pages); Dana's *Two Years Before the Mast*; Selections from Lincoln, including at least the two Inaugurals, the speeches in Independence Hall and at Gettysburg, the Last Public Address, and the Letter to Horace Greeley, together with a brief memoir or estimate of Lincoln; Parkman's *The Oregon Trail*; Thoreau's *Walden*; Lowell's *Selected Essays* (about 150 pages); Holmes' *The Autocrat of the Breakfast Table*; Stevenson's *Anatomy of a Voyage and Travels with a Donkey*; Huxley's *Autobiography* and selections from *Lay Sermons*, including the addresses on *Improving Natural Knowledge*, *A Liberal Education*, and *A Piece of Talk*; a collection of *Essays* by Bacon, Lamb, DeQuincey, Hazlitt, Emerson, and later writers; a collection of *Letters* by various standard writers.

GROUP V. POETRY.—Palgrave's *Golden Treasury* (First Series); Books II and III, with special attention to Dryden, Collins, Gray, Cowper, and Burns; Palgrave's *Golden Treasury* (First Series), Book IV, with special attention to Wordsworth, Keats, and Shelley (if not chosen for study under B); Goldsmith's *The Traveller* and *The Deserted Village*; Pope's *The Rape of the Lock*; a collection of *English and Scottish Ballads* as, for example, some *Robin Hood Ballads*, *The Battle of Otterburn*, *King Estmere*, *Young Beichan*, *Rowland and Grahame*, *Sir Patrick Spens*, and a selection from later ballads; Coleridge's *The Ancient Mariner*, *Christabel* and *Kubla Khan*; Byron's *Childe Harold*, Canto III or IV, and the *Prisoner of Chillon*; Scott's *The Lady of the Lake*, or *Marmion*; Macaulay's *The Lays of Ancient Rome*, *The Battle of Naseby*, *The Armada*, *Waverley*; Tennyson's *The Princess*, or *Gareth and Lynette*, *Lancelot and Elaine*, and *The Passing of Arthur*; Browning's *Cavalier's Song*, *The Lost Leader*, *How They Brought the Good News from*

Ghent to Aix, Home Thoughts from Abroad, Home Thoughts from the Sea, Incidents of the French Camp, Hervé Riel, Pheidippides, My Last Duchess, Up at a Villa—Down in a City, The Italian, England, The Patriot, The Pied Piper, "De Gustibus"—, Instant Tyrannus; Arnold's Sohrab and Rustum, and The Forsaken Man; Selections from American Poetry, with special attention to Poe, Lowell, Longfellow, and Whittier.

B. STUDY.—This part of the requirement is intended as a natural and logical continuation of the student's earlier reading, with greater stress laid upon form and style, the exact meaning of words and phrases, and the understanding of allusions. The books provided for study are arranged in four groups, from each of which one selection is to be made.

GROUP I. DRAMA.—Shakespeare's Julius Cæsar, or Macbeth, or Hamlet.

GROUP II. POETRY.—Milton's L'Allegro, Il Penseroso, and either Comus or Lycidas; Tennyson's The Coming of Arthur, The Holy Grail, and The Passing of Arthur; the selections from Wordsworth, Keats and Shelley in Book IV of Palgrave's Golden Treasury (First Series).

GROUP III. ORATORY.—Burke's Speech on Conciliation with America; Macaulay's Two Speeches on Copyright, and Lincoln's Speech at Cooper Union; Washington's Farewell Address, and Webster's First Bunker Hill Oration.

GROUP IV. ESSAYS.—Carlyle's Essays on Burns, with a selection from Burns' Poems; Macaulay's Life of Johnson; Emerson's Essay on Manners.

HISTORY

Ancient History to the Coronation of Charlemagne with special reference to the history of Greece and Rome. (Myer's Ancient History or equivalent.)

Mediaeval and Modern History, a year's work based on a textbook, but including reference reading and note-book work. (Myer's Middle Ages and Myer's Modern Age or equivalent.)

English History, including text, reference and note-book work for one year. (Andrew's History of England or equivalent.)

United States History and Civil Government. (Channing's Student's History and Ashley's Federal State or equivalent.)

GREEK

Greek lessons and grammar.

Xenophon, four books of the Anabasis, and composition.

Homer, three books of the Iliad, with prosody; ability to read Greek at sight.

LATIN

Latin lessons and grammar.

Cæsar, Commentaries (Books I-IV).

Cicero, seven orations, including those against Catiline and for the poet Archias, and the Manilian Law.

Virgil, six books of the Aeneid and prosody.

Grammar, composition and sight reading are required as a portion of each year's work.

FRENCH

Elementary. One year of French; elements of grammar; ability to write at dictation and to translate from English; reading of about one hundred and fifty pages of text.

Intermediate. Additional work in French, amounting to one year's advanced work in translation and composition.

Advanced. The ability to read at sight any piece of modern prose poetry and to write in French a paper on an assigned subject.

GERMAN

Elementary. One year of German, elements of grammar; ability to write at dictation and to translate from English; reading of about one hundred and fifty pages of text.

Intermediate. Additional work in German amounting to one year's advanced work in translation and composition.

Advanced. The ability to read at sight any piece of modern German prose of moderate difficulty and to write in German a paper on an assigned topic.

SPANISH

Spanish (1 or 2 units). Including an accurate knowledge of the essentials of grammar, ability to write ordinary Spanish and to read ordinary Spanish prose.

MATHEMATICS

Elements of Algebra, with special attention to factoring and solution of equations, and including ratio and proportion.

Algebra ($\frac{1}{2}$ unit), being a continuation of the course in the elements of Algebra with special emphasis on algebraic theory.

Algebra ($\frac{1}{2}$ unit). Quadratics and indeterminate equations, irrational and imaginary numbers, ratio, proportion and variations, review; also theory of exponents, progressions, undetermined coefficients and logarithms.

Plane Geometry, with original exercises and problems.

Solid Geometry ($\frac{1}{2}$ unit). With original exercises and problems.

Trigonometry ($\frac{1}{2}$ unit). Elementary course in plane trigonometry.

PHYSICAL AND BIOLOGICAL SCIENCES

Physics, covering an elementary knowledge of dynamics, sound, light, heat, magnetism and electricity; recitation and laboratory work.

Chemistry, including classroom and laboratory work in the elements of chemistry as presented in modern standard text-books of the subject. At least five exercises a week for one year.

Physical Geography, covering the descriptive and explanatory study of the commoner phenomena of nature, including satisfactory laboratory and field work.

Botany, covering the morphology and simpler physiology of the higher plants, including some acquaintance with the local flora.

Zoology, emphasizing scientific methods and training.

EXTRA ENTRANCE CREDITS

If by examination or by certificate, a student presenting more than fifteen units of commended work for admission may, after the lapse of a semester and upon formal application, receive college credit for certain subjects, provided that these subjects, or others closely allied, have been continued in college with high grade, one unit of commended work being allowed three hours of college credit. Extra credit is thus allowed only in foreign language, advanced mathematics and advanced science. Credit, varying in amount with the individual courses, is granted for graduate work in approved high schools.

CURRICULUM

DEGREE OF BACHELOR OF ARTS

The courses of study offered lead to the degree of Bachelor of Arts under the following hour and credit requirements.

HOUR REQUIREMENTS

One hundred and twenty-six hours of work are required for graduation. An "hour" consists of one recitation or lecture period, or one laboratory period a week for one semester. A recitation or lecture period covers fifty-five minutes; a laboratory period covers, in general, the time of two such periods. In order to complete the course in four years one must take an average of fifteen hours of academic work per semester throughout the four years.

CREDIT REQUIREMENTS

In order to graduate a student must not only earn a minimum number of hours, but also attain an average of at least B grade in those hours. To this end a certain number of credits is ascribed to each grade as a basis of determining average grade. The scale is so adjusted that the number of credits required for graduation coincides with the number of hours. Details regarding credits are published in the "Manual of Procedure."

CHOICE OF SUBJECTS

In the selection of his work the student is given a large measure. The only limitations are such as will insure to him, on the one hand, the breadth of view which may be gained by an introductory study of each of the great realms of knowledge; and, on the other, that concentration along

some chosen line of work which shall develop power of thought and an actual fund of knowledge in some particular field. To this end there are certain subject requirements stated below. The College would emphasize also, the ability of selecting work representing each of the following broad groups of subjects:

1. Language, Literature and Fine Arts.
2. Mathematics, Physical and Biological Sciences.
3. History, Social Sciences and Philosophy.

SUBJECT REQUIREMENTS

English Composition¹—6 hours, Freshman year.

English Literature—6 hours, Freshman or Sophomore year.

French or German or Spanish—12 hours, Freshman or Sophomore years.

History—6 hours, Freshman or Sophomore year, except for those who enter with credit for three units of History.

Hygiene—2 hours, Freshman or Sophomore year.

Mathematics²—6 hours, ordinarily Freshman year, except for those who enter with credit for three units of Mathematics. Such may substitute a year of work in science for required mathematics; this science may be used to meet requirement in science immediately following.

Physics, Chemistry, Zoology, Botany or Physiology—6 hours, Freshman or Sophomore year, except for those who enter with credit for three units in these subjects. A student who enters with only one unit of science must take 6 hours of another line of science and, in general, it is expected that one will take in college at least 6 hours in science in a different line from any presented for entrance.

¹Waived in the case of those who, by entrance test, prove an ability to write and spell well.

²The requirement may be waived in only one of these groups, whatever the preparation.

Physical Education—4 hours in Freshman and Sophomore years and 2 hours in Junior and Senior years for those not taking Military Training. For those taking Military Training the requirement is 1 hour per year throughout the course.

Military Training—Required of all men entering to Freshman, Sophomore or Junior standing, until they have completed for two years' work or the equivalent.

Economics—6 hours, usually Sophomore or Junior year.

Philosophy—3 hours, Sophomore or Junior year; or History

Philosophy—6 hours Junior year.

Psychology—3 hours, Sophomore or Junior year.

In addition to these requirements, there is a general requirement of 36 hours of C and D work, of which at least 12 must be D work.

Students who have shown special ability in one line of work may, with the consent of the head of the department, elect for a departmental major. This major includes, usually, at least 18 hours in the department chosen, together with certain courses in allied subjects, and usually a reading knowledge of French and German. The student plans his work in consultation with the head of the department concerned. Certain prerequisites, differing with the subject chosen, are indicated for each major. A final examination in thesis or both may be required.

Students who desire to become candidates for a departmental major should indicate such intention as early as possible, and must be registered as candidates for such departmental major not later than the first week of registration in their Senior year.

The student who completes a departmental major receives in addition to his diploma the special commendation of the department.

COURSES IN MUSIC AND ART

The College is equipped to offer unusual privileges in Departments of Art and of Theoretical and Applied Music. The influence of the College is greatly enriched by the contributions made through these departments to the cultural life of the institution as a whole. In Bridges Hall the great musicians of the world are heard, all students being supplied with admission to their concerts. Great enlargement of knowledge comes through intimate acquaintance with these arts, both in theoretical and applied forms, and the College urges all regular students to include them, at least to some degree, in their cultural courses, credit toward the B.A. degree being granted on conditions specified under the detailed description of courses.

TEACHERS' CERTIFICATES IN MUSIC AND ART

The College is authorized by the State Board of Education to issue to individuals who complete a prescribed course of study, credentials entitling them to a certificate to teach music or art in the public elementary and secondary schools of the State of California.

Candidates for the B.A. degree may also be candidates for such certification, but they must ordinarily expect to spend five years in attaining the two, in view of the standards of efficiency required, the practice demands and the practical teaching. Detailed information may be had on application.

SUMMER SESSION

The Summer Session affords opportunity to undergraduate students, especially, but also to high school teachers and others, to pursue work for credit in various departments. The Department of Zoology conducts its work at the Laguna Beach Marine Laboratory, Professor W. A. Hilton, Director. Other departments meet jointly in the College building.

Claremont. The session opens immediately after Commencement and continues for six weeks.

MUSIC AND LECTURE COURSE

In order to insure to the entire student body the opportunity of hearing and seeing the great artists of the day whose public appearance is usually confined to the larger cities, the College introduces each year a group of the most distinguished masters in the various departments of achievement. For the lectures, concerts and other entertainments an annual ticket is furnished to every student.

DEGREE OF MASTER OF ARTS

Pomona College is primarily an undergraduate college, and places its main emphasis upon undergraduate courses. However, those departments of the College which are adequately equipped for the pursuance of graduate work may accept especially well qualified students as candidates for the degree of Master of Arts. Such students should consult with the chairman of the Committee on Graduate Work as to the special requirements which will be made in their cases. In addition to the presentation of a thesis, twenty hours of work are required for the higher degree. The twenty hours are divided between a major subject and a minor subject in the same or in a closely allied department. No elementary undergraduate work may be counted, and at least six hours must be of a strictly graduate character. A candidate receives two-thirds credit for a C or D course, unless in the opinion of the Instructor the work of the course justifies full credit. One copy of the thesis, bound in accordance with specifications in the hands of the librarian, must be placed in the College library.

COURSES WITHOUT DEGREES

In exceptional cases mature students who desire to receive instruction in courses not leading to a degree will be admitted provided they give evidence of their fitness for such work.

LECTURES

THE JOSEPH H. JOHNSON FOUNDATION

The Joseph H. Johnson Foundation, liberally endowed by Miss Ellen B. Scripps, provides an annual income for the purpose of furnishing to the College for a protracted stay and intimate participation in college life notable educators from other institutions. By this means such educators are annually in residence in Pomona College. The opportunity of intimate contact with distinguished instructors thus afforded to undergraduates is a unique privilege, often surpassing the privileges of the classroom of the institution from which these educators come.

THE HENRY D. PORTER FOUNDATION

The Henry D. Porter Foundation, named in honor of the late Rev. Henry D. Porter, for many years a missionary in China, secures to the institution annually, the extended stay of some prominent worker in the field of Christian Missions. The lecturer upon this foundation commonly shares in the regular class room work related to the history, geography, politics or religion of the region in which he has been actively at work. This vivid representation of the missionary life is one of the most stimulating features in the spiritual program of the College.

CURRICULUM

An outline of the work which leads to graduation is here given by years. A more complete description of each course may be found under "Departments of Instruction."

Each "hour" represents one recitation or laboratory period per week for one semester.

CURRICULUM

43

FRESHMAN YEAR

Hygiene ¹	2 semester hours
Physical Education ²	2 semester hours
Military Training (for men).....	3 semester hours
French, German or Spanish ³	6 semester hours
English Composition, or History ⁴ or English Literature	6 semester hours
Mathematics ⁵ , or Science ⁵	6 semester hours
Elective.....	Not less than 6 nor more than 15 semester hours

SOPHOMORE YEAR

Physical Education ²	2 semester hours
Military Training (for men).....	3 semester hours
French, German or Spanish ³	6 semester hours
Mathematics ⁶ , or Science ⁶	6 semester hours
English Literature, or History ⁴ or Economics or Psychology and Philosophy.....	6 semester hours
Elective.....	Not less than 6 nor more than 15 semester hours

JUNIOR YEAR

Physical Education.....	1 semester hour
Elective.....	not more than 34 semester hours
Should include any course requirements not already completed; and at least 12 hours of advanced (C and D) courses.	

SENIOR YEAR

Physical Education.....	1 semester hour
Elective.....	not more than 34 semester hours
Should include 6 hours in D courses and enough advanced (C and D) courses to complete the graduation requirement of "36 hours of C and D work, of which 9 must be D."	

¹Must be taken in Freshman year by the women, and in Freshman or Sophomore year by the men, unless the equivalent is offered.

²One hour required of those taking Military Training.

³Must continue language begun in Freshman year unless two years of some language are accepted for entrance, in which case the requirements may be met by 6 hours of that language and 6 hours of the other foreign language.

⁴Must be taken in Freshman or Sophomore year, unless 3 units of History have been accepted for entrance.

⁵Students offering three units of accepted Mathematics or laboratory science will be excused from further work in one of these subjects, but not in both.

⁶Unless Mathematics or science requirement was met in Freshman year.

COURSES OF INSTRUCTION

DESIGNATION OF COURSES

The letter preceding the number in the designation of a course indicates in general its grade. Elementary courses, designated A (as English A1) are given in Freshman or Sophomore year; B courses are either those which follow the A courses of earlier year or the more advanced beginning courses; C and D courses are more advanced courses given to Juniors and Seniors, D courses being the more difficult. The natural sequence of courses is from A to B, B to C, and C to D, and a student may not enter a C or D course without previous work in the same line.

To pass from an A course to a C course or from a B course to a D course requires the written consent of the teacher.

Seniors may elect an A course only by permission of the Classification Committee, and with a discount of hours.

Any course may be withdrawn if the enrollment is less than five.

The Roman numeral immediately preceding the teacher's name shows the period of recitation, as follows:

	7:30	8:30	9:30	11:15
M, W, F.....	I	III	V	VII
T, Th, S.....	II	IV	VI	VIII
	1:15	2:15	3:15	
M, W, F.....	IX	XI	XIII	
T, Th.....	X	XII	XIV	

When the letter A is found in place of the Roman numeral, the course is offered at hours to be arranged with the teacher. When the numeral is preceded by a letter or letters, the class meets only on the day designated.

ART

All lessons are two hours each, receiving with the required practice one hour of credit.

The following description of courses is suggestive only, as the

varies slightly from year to year, as the needs of the individual demand.

courses except Art C11 and C12 are given by Assistant Professor Jenkins, the head of the Department.

courses in Graphics, Machine Drawing, Descriptive Geometry, and others are described under the Department of Engineering.

a, A1b. DRAWING FROM CAST AND OBJECT.

Freshman and Sophomore years. 1 hour each.

a, A2b. PAINTING IN WATER COLORS. Color problems, tones, tints, intensities and values; still life; introduction of landscapes and flowers from nature.

Freshman and Sophomore years. 1 hour each.

a, B3b. DRAWING FROM CAST. Full length figure and head in perspective.

Freshman and Sophomore years. 1 hour each.

a, B4b. LANDSCAPE AND FLOWERS IN WATER COLOR AND PASTEL.

Sophomore and Junior years. 1 hour each.

a, B5b. ELEMENTARY DESIGN.

Sophomore year. 1 hour each.

. SKETCH CLASS.

Freshman years. Both semesters. 0 hours. Fee \$1.00.

a, B9b. ART APPRECIATION. The terminology and technique of all lines of art are discussed. A critical study of interior decorating.

Open to Freshmen.

Sophomore and Junior years. 1 hour each. Th. VIII.

C11. HISTORY OF ART. Outline study of Greek art. attempt is made to trace the historic development of various forms of Greek art through its chief periods.

Junior and Senior years, first semester. 3 hours. VII.
Professor Spalding.

C12. HISTORY OF ART. Study in Gothic and renaissance architecture, sculpture and painting.

Junior and Senior years, second semester. 3 hours. VII.
Professor Spalding.

C15a, C15b. ANATOMY OF HEAD AND FULL LENGTH FIGURE. Drawing from life in charcoal.

Junior and Senior years. 1 hour each.

C16a, C16b. PAINTING IN OIL COLORS.

Junior and Senior years. 1 or 2 hours each.

D17a, D17b. PORTRAIT PAINTING.

Junior and Senior years. 1 or 2 hours each.

Model fee, \$2.00 per hour per semester.

D18a, D18b. LANDSCAPE IN OILS.

Junior and Senior years. 1 hour each.

D19a, D19b. TEACHING OF ART. A practice course for prospective teachers, including a study of planning work in the studio and actual practice teaching under supervision.

Junior and Senior years. 2 hours each.

D20a, D20b. ADVANCED DESIGN.

Junior and Senior years. 1 hour each.

ASTRONOMY

C1a, C1b. GENERAL ASTRONOMY. A general course consisting of lectures and recitations in descriptive astronomy with regular evenings at the observatory, and simple observations systematically recorded in notebooks.

This course is designed for students who have had only elementary

in physics or chemistry, and trigonometry. Class room, two weeks; lecture and observatory amounting to one exercise

for Junior and Senior years, both semesters. 3 hours. VII.

Professor Brackett.

A, B17b. NAVIGATION AND NAUTICAL ASTRONOMY.

For Junior, Junior and Senior years, first and second semesters.

Professor Brackett.

(given in 1919-1920.)

HISTORY OF ASTRONOMY. A study of the essential facts and principles of astronomy with lectures and readings on the history of its development as a science and discussion of theories of cosmogony and evolution. Systematic observation of certain objects with the equatorial.

This course is designed for students who have a working knowledge of analytic geometry and calculus and of the more important facts in physical science; or it may be taken as an advanced course by those who have had Astronomy B1. Some preparation in mechanical and mechanical drawing also is very desirable.

For Junior and Senior years, first semester. 3 hours. IV.

Professor Brackett.

THEORETICAL AND PRACTICAL ASTRONOMY. Spherical trigonometry; least squares; determination of time, latitude and longitude with sextant and theodolite; regular observation work with equatorial and transit.

Prerequisites: Astronomy B1 or C3.

This course may be taken in conjunction with Astronomy B1b by students who have had sufficient preparation in mathematics and physics. Ordinarily alternates with Astronomy D6.

Class room, one hour a week; lecture and observatory amounting to two exercises a week.

For Junior and Senior years, second semester. 3 hours.

Professor Brackett.

(given in 1919-1920.)

D6. ASTROPHYSICS. A review of the principles of spectrum analysis, and the results obtained in physical and chemical laboratories; a study of astronomical spectroscopy of forms of spectrographs and spectroheliographs, and recent advances in the subject; observatory work with a horizontal solar telescope and spectrograph.

This course may be taken in conjunction with Astronomy B1 for students who have sufficient preparation in physical science. Classroom, one hour a week; lecture and observatory amounting to exercises a week. Prerequisite: Astronomy B1. Ordinarily alternates with Astronomy D4.

Junior and Senior years, second semester. 3 hours. V.

Professor Brackett.

Laboratory fee \$5.00.

BIBLICAL LITERATURE

GENERAL BIBLE STUDY

Though courses B3, B4, B9, B10, C5, and C6 are complete in themselves, no hours or credits are accepted for graduation until at least two of them are completed.

A1a, A1b. CONTENTS OF THE BIBLE. The purpose is to make the student acquainted with the contents of the English Bible. The material, style and purpose of various facts will be discussed.

Freshman year, both semesters. 1 hour each. W, IX.

Professor Colcord.

B3. THE PRESERVATION AND TRANSMISSION OF THE OLD TESTAMENT. A general study of the manuscripts, versions and other authorities, together with the history of biblical translations.

Sophomore year, first semester. 1 hour. W, XI.

Mr. Marriott.

THE PRESERVATION AND TRANSMISSION OF THE NEW TESTAMENT. A general study of the manuscripts, versions, and other authorities, together with the history of Biblical editions.

Junior year, second semester. 1 hour. W, XI.

Professor Norton.

OLD TESTAMENT INTRODUCTION. Historical and Literary Study of the Old Testament. Lectures, reading selected portions of the Old Testament narrative, and the use of a brief volume of Old Testament Introduction.

Junior year, first semester. 1 hour.

Professor Stearns.

(Not given in 1919-1920.)

NEW TESTAMENT INTRODUCTION. An introduction to the historical study of the New Testament writings, purposing to give briefly the theories of origin of the various Gospels and of the formation of the collection called "The New Testament."

Junior year, second semester. 1 hour.

Mr. Marriott.

(Not given in 1919-1920.)

C7 and C8. THE TEACHINGS OF JESUS. The sources of our knowledge of the life of Jesus, the critical problems involved in a study of these sources, and a systematic study of the life and teachings of Jesus in the light of His own and ours. Lectures and text-book.

Open to Seniors, and to Juniors with permission of instructor. Two semesters. 1 hour.

Mr. Hand.

(Not given in 1919-1920.)

B9. POETRY OF THE BIBLE.

Sophomore and Junior years, first semester. 1 hour. W.
Professor Stearns.

B10. THE OLD TESTAMENT AS LITERATURE.

Sophomore and Junior years, second semester. 1 hour. W.
Professor Stearns.

BIBLICAL HISTORY AND LITERATURE

B21. ANCIENT ORIENTAL HISTORY AND LITERATURE.
The beginnings of the earliest civilization, and its development in the lands of the Biblical environment, including Babylonia, Assyria and Egypt. A background for a comprehensive study of Biblical History and Literature.

Sophomore year, first semester. 3 hours.

Professor Stearns.

(Not given in 1919-1920.)

B22. ANCIENT ORIENTAL HISTORY AND LITERATURE.
A continuation of B21, dealing with Persia and Palestine.

Sophomore year, second semester. 3 hours.

Professor Stearns.

(Not given in 1919-1920.)

C23. HEBREW HISTORY AND LITERATURE. From early Semitic times: in history, to the capture of Jerusalem by Titus; in literature, to the completion of the Old Testament canon.

Junior and Senior years, first semester. 3 hours. I.

Professor Stearns.

C24. EARLY CHRISTIAN HISTORY AND LITERATURE. The development during the first four centuries.

Junior and Senior years, second semester. 3 hours. I.

Professor Stearns.

1. **CHRISTIAN MISSIONS.** History of efforts to extend knowledge of Biblical literature, with special attention to missionary movements.

Junior and Senior years, first semester. 3 hours.

Professor Stearns.

(given in 1919-1920.)

2. **HISTORY OF RELIGIONS.** Development of the great religious systems of the world, with such ethical analysis as is necessary for comparisons with Biblical values. The purpose is to widen historical information, and to emphasize the place the Bible holds in religion.

Junior and Senior years, first semester. 3 hours. VI.

Professor Stearns.

3. **HISTORY OF CHRISTIANITY.** The historical development of Christianity into a world religion. Lecture course with required readings.

Junior and Senior years, second semester. 3 hours. VI.

Professor Stearns.

4. **THE POETRY OF THE BIBLE.** With special study of the prophecies of Isaiah, The Psalms, and Job.

Junior and Senior years, first semester. 3 hours.

Professor Stearns.

(given in 1919-1920.)

5. **SEMITIC INSTITUTIONS AND CULTURE.** Specialized study of customs, arts, and letters, more or less connected with Old Testament history.

Prerequisite: Biblical Literature, B22 or C23.

Junior and Senior years, second semester. 3 hours.

Professor Stearns.

(given in 1919-1920.)

BIOLOGY

A1. GENERAL BIOLOGY. A course introductory to study of animal life, comprising field and laboratory work on living organisms, and especially scientific methods of observing and recording facts.

Prerequisite to further work in zoology. Class room, two hours a week; laboratory, one exercise a week.

Freshman year, first semester. 3 hours. Class room M, W, laboratory, T, W, or Th, 1:15-4:10.

Assistant Professor Munz and Assistants.

Laboratory fee, \$5.00.

A2. GENERAL BIOLOGY. An elementary course designed to acquaint the general student with the main ideas of biology through the study of a series of organisms and through selected practical studies of the phenomena on which biological principles are based, such as those of evolution, adaptation, life processes, etc.

This course is largely a continuation of A1 and intended primarily for those who desire a glimpse into the general field of Biology. Those intending to take up Botany are advised to enter directly Botany B21. Laboratory and field work, one period a week; lecture two periods a week.

Freshman year, second semester. 3 hours. Class room, M, W, VII; laboratory, T, W, or Th, 1:15-4:10.

Professor Hilton and Assistants.

Laboratory fee, \$5.00.

Beginning September, 1920, students will be required to take both Biology A1 and A2 to secure credit.

C7. BIOLOGICAL LITERATURE. A study of recent advances in the whole field of Biology. An intensive study of selected books, papers and monographs form the material for this course. General reviews and class discussions.

requisite: A year of biological work.

Sophomore and Junior years, first semester. 3 hours. I.

Assistant Professor Munz.

21. BIONOMICS. Modern biological problems. This course includes an outline of the progress of thought in various departments of Biology and a study of the important modern problems in the whole field. Lectures, class discussions and individual reports.

requisite: At least a year of biological work.

Sophomore and Senior years, or Sophomore year for those who have Biology C7, second semester. 3 hours. I.

Professor Hilton.

BOTANY

21. GENERAL BOTANY. A general course covering botany in two semesters the fundamental facts and principles of plant life, with a careful study of form, structure, reproduction of representatives from the principal groups. Emphasis is placed on the evolutionary tendencies exhibited.

A necessary introductory course for advanced work in botany. Includes laboratory and field work. Laboratory, two exercises a week; field, one hour a week.

Freshman and Sophomore years, first semester. 3 hours. F, I; Laboratory, T and Th, 1:15-4:10.

Assistant Professor Munz and Assistant.

Laboratory fee, \$7.00.

22. GENERAL BOTANY. A continuation of B21, dealing primarily with the vascular plants.

Prerequisite: Botany B21 or equivalent.

Freshman and Sophomore years, second semester. 3 hours.
I; laboratory, T and Th, 1:15-4:10.

Assistant Professor Munz and Assistant.

Laboratory fee, \$7.00.

Beginning with September, 1920, students must take both Botany B21 and B22 for credit.

C24. PLANT HISTOLOGY. A study of the structure and morphology of plant tissues and organs, emphasis being placed on the relation of structure to function, and on the modification produced by phylogenetic and ecological factors. Some attention is given to methods in microtechnique.

Two laboratory periods and one lecture a week.

Prerequisite: Botany B22. Alternates with Botany C25.

Junior and Senior years, first semester. 3 hours.

Assistant Professor Munz.

Laboratory fee, \$7.00

(Not given in 1919-1920.)

C23. PLANT PHYSIOLOGY. A study of the behavior and life processes of plants, their nutrition, growth, reproduction, etc.

A glass house and well equipped laboratory are available for this work. Laboratory, two periods a week; lecture, one hour a week.

Prerequisite: Botany B22. Alternates with Botany C26.

Junior and Senior years, second semester. 3 hours.

Assistant Professor Munz.

Laboratory fee, \$7.00.

(Not given in 1919-1920.)

C25. COMPARATIVE MORPHOLOGY. A course in comparative and developmental studies of Bryophytes, Pteridophytes, and Spermatophytes. Emphasis is placed on reproduction and evolution.

Two laboratory periods and one lecture a week.

Prerequisite: Botany B22. Alternates with Botany C24.

Junior and Senior years, first semester. 3 hours.
Assistant Professor Munz.
Laboratory fee, \$5.00.

25. BACTERIOLOGY. A general course dealing with the life of bacteria in nature, their classification and methods of study; the use of culture media, stains, etc.; general milk and water analysis; and a consideration of representative forms.

Two laboratory periods and one lecture a week.
Prerequisite: Biology A2.

Sophomore and Junior years, first semester. 3 hours. A.
Assistant Professor Munz.
Laboratory fee, \$5.00. Breakage deposit, \$5.00.

26. TAXONOMY. A study of the classification and identification of the local seed plants and ferns with some reference to their ecology. Herbarium methods are also considered. Both laboratory and field work.

Two laboratory periods and one lecture a week.
Prerequisite: Botany B22. Alternates with Botany C23.
Junior and Senior years, second semester. 3 hours. A.
Assistant Professor Munz.
Laboratory fee, \$5.00.

D29. MYCOLOGY AND PLANT PATHOLOGY. A systematic study of the great group of fungi, with special emphasis on those forms causing plant diseases, on methods of control and of study in the laboratory.

An extensive herbarium of fungi available for reference. Important for those intending to enter agricultural work. Laboratory and field work, two periods a week; lecture, one hour a week.
Junior and Senior years, second semester. 3 hours.
Assistant Professor Munz.
Laboratory fee, \$5.00.
(Not given in 1919-1920.)

D30. PLANT PROPAGATION AND BREEDING. The methods and principles of the propagation of plants, improvement of plant varieties. Practice in the care of seeds, cuttings, bulbs, and potted plants; in grafting and budding; in hybridizing and in selection.

A glass house, lath house and special laboratory equipment available. Designed for those interested in nursery work, landscape gardening, etc.

Two laboratory periods and one lecture a week.

Prerequisite: Botany B22.

Junior and Senior years, second semester. 3 hours. A.

Assistant Professor Munz.

Laboratory fee, \$10.00.

D31, D32. INVESTIGATION AND RESEARCH. Minor investigations in the various fields of Botany. A course for those only who have had sufficient botanical training to warrant the undertaking of some original investigation. Work individual. Permission of instructor necessary. A requirement for those majoring in Botany.

Junior and Senior years, both semesters. 1 to 3 hours each. A.

Assistant Professor Munz.

Laboratory fee, \$2.00 for each hour of credit.

CHEMISTRY

Students who wish to major in Chemistry should be prepared to meet the following requirements:

1. A knowledge of elementary Physics, equivalent to Physics A.
2. Sufficient acquaintance with French and German to enable the student to follow with tolerable ease the literature of the subject.
3. Mathematics, including the elements of the Calculus.
4. Twenty-one or more hours of C and D courses in Chemistry, the precise nature and number to be determined in individual cases.
5. In some cases a special examination covering the general field of Chemistry.

A breakage deposit of \$5.00 is required of all students taking laboratory courses. At the conclusion of the work the deposit, less breakage, is returned.

A1a, A1b. THE ELEMENTS OF CHEMISTRY. An introductory course covering the general field, and intended for those who have no previous knowledge of the subject.

To be accompanied by A2a and A2b.

Class room, three hours a week. 3 hours each. II.

Freshman year, both semesters.

Professor Lyman.

A2a, A2b. GENERAL LABORATORY WORK, to accompany A1a and A1b, and designed to give an idea of chemical manipulations. It includes the preparation of various typical substances, and also covers the general field of qualitative analysis.

Laboratory, two periods a week.

Freshman year, both semesters. 2 hours each. T, W, Th, 1:15-3:00.

Laboratory fee, \$10.00 each semester.

Miss Haury.

A3a, A3b. SYSTEMATIC INORGANIC CHEMISTRY. A general course intended for those who have had high school chemistry or its equivalent, but otherwise somewhat resembling A1a, A2a.

To be accompanied by A4a and A4b.

Class room, three hours a week. 3 hours each. III.

Freshman year, both semesters.

Professor Lyman.

A4a, A4b. GENERAL LABORATORY WORK, to accompany A3a, and A3b. It includes certain inorganic preparations, and also covers the general field of qualitative analysis.

Laboratory work, one period a week.

Freshman year, both semesters. 1 hour each, T, W, or Th, 1:15-4:10.

Laboratory fee, \$6.00 each semester.

Miss Haury.

B5a. QUALITATIVE ANALYSIS.

Laboratory periods twice a week, from which time may be taken for one class meeting a week.

Freshman or Sophomore year, first semester. 2 hours. Laboratory (four periods, from which two are to be chosen), M, F, 1:30-4:30.

Laboratory fee, \$10.00.

(Not given in 1919-1920.)

B6. QUALITATIVE ANALYSIS. Inorganic Analysis
special reference to non-metals and negative ions.

Laboratory periods twice a week, from which one hour may be taken for class meeting.

Freshman or Sophomore year, second semester. 2 hours. Laboratory (four periods, from which two are to be chosen), Th, F, 1:30-4:30.

Laboratory fee, \$10.00.

(Not given in 1919-1920.)

B7. QUANTITATIVE ANALYSIS. Theory and practice of quantitative methods, chiefly gravimetric, including problems of stoichiometry. Intended to give the student knowledge of the fundamental methods of work.

Prerequisites: A2a and A2b, or A4a and A4b.

Occasional lectures. Laboratory, three periods a week.

Sophomore, Junior and Senior years, first semester. 3 hours. W, Th, 1:15-4:10.

Associate Professor Bartlett.

Laboratory fee, \$12.00.

B8. QUANTITATIVE ANALYSIS. Theory and practice of quantitative methods, chiefly volumetric, with some electroanalysis, and problems of stoichiometry.

Prerequisite: Chemistry B7.

Occasional lectures; laboratory work, three periods a week.

Sophomore, Junior and Senior years, second semester. 3 hours. T, W, Th, 1:15-4:10.

Associate Professor Bartlett.

Laboratory fee, \$12.00.

SYSTEMATIC ORGANIC CHEMISTRY. A general survey of the field of the chemistry of the compounds of carbon, taking up chiefly the paraffin, olefin and acetylene compounds and their derivatives.

Prerequisites: Chemistry A1a and A2a, or A3a and A3b.
Lecture room, 2 hours a week; laboratory, one period a week.
Freshman, Junior and Senior years, first semester. 3 hours. VII.
Professor Lyman.
Laboratory fee, \$6.00.

2. SYSTEMATIC ORGANIC CHEMISTRY. A continuation of Chemistry B9, taking up the cyclic compounds of carbon, and some special phases of organic chemistry.

Prerequisite: Chemistry B9.
Lecture room, two hours a week; laboratory, one period a week.
Freshman, Junior and Senior years, second semester. 3 hours.
Professor Lyman.
Laboratory fee, \$6.00.

1. ADVANCED QUANTITATIVE ANALYSIS. A continuation and further development of Chemistry B7 and B8. This may take the form of rock analysis, agricultural analysis, or some other practice in standard quantitative methods.

Prerequisites: Chemistry B7 and B8.
Laboratory, three periods a week.
Junior and Senior years, first semester. 3 hours. A.
Associate Professor Bartlett.
Laboratory fee, \$12.00.

2. ADVANCED QUANTITATIVE ANALYSIS. This may take the form of special agricultural or organic analysis (fertilizers, insecticides, fungicides, etc.); or of gas-analysis, including general technical processes and the determination of the densities of gases.

Prerequisites: Chemistry B7 and B8.
Laboratory, three periods a week.
Junior and Senior years, second semester. 3 hours. A.

Associate Professor Bartlett.

Laboratory fee, \$12.00.

C17. FOOD ANALYSIS. A laboratory course in analysis of typical foodstuffs, for the determination of the composition and purity.

Prerequisites: Chemistry B7 and B8, and B9 and C10.

Class room, one hour; laboratory, two periods a week.

Junior and Senior years, first semester. 3 hours. F, VIII. Laboratory, T, Th, 1:15-4:10.

Miss Haury.

Laboratory fee, \$10.00.

C16. FOOD CHEMISTRY. A technical study of the composition, sources, and comparative value of foodstuffs.

Must be preceded by or accompanied by Chemistry C10.

Class room, three hours a week.

Junior and Senior years, second semester. 3 hours. VII.

Miss Haury.

D13. ADVANCED ORGANIC CHEMISTRY. Intended to supplement Chemistry B9 and C10 so that the student may be better fitted for university work. A study of certain typical reactions, with the preparation of compounds illustrating the changes studied.

Prerequisites: Chemistry B9 and C10.

Occasional lectures; laboratory work, three periods a week.

Junior and Senior years, second semester. 3 hours. A.

Professor Lyman and Associate Professor Bartlett.

Laboratory fee, \$12.00.

D20. ELEMENTS OF PHYSIOLOGICAL CHEMISTRY. A study of changes in organic compounds, especially those which have to do with the processes of life. Intended to prepare the student for further work in physiological chemistry, but not to take the place of courses given in medical school in the subject.

Prerequisites: Chemistry B9 and C10.

Class room, one hour a week; laboratory, two periods a week.

Junior and Senior years, first semester. 3 hours. A.

Professor Lyman.

Laboratory fee, \$10.00.

C14a, C14b. SOIL SCIENCE. The origin of soils, and their physical, chemical and bacteriological properties; soil conditions as related to plant growth.

Prerequisites: Chemistry A1a and A1b, or A3a and A3b.

Class room, two hours a week; laboratory, one period a week.

Sophomore and Junior years, both semesters. 3 hours each.

Prof. Woodford.

(Not given in 1919-1920.)

MINERALOGY. (See Geology B3, C5 and C6.)

(Not given in 1919-1920.)

C18a, D18b. CHEMISTRY CONFERENCE. Designed primarily to establish in the minds of those students who wish to be teachers the fundamental principles and the details of chemical theory ordinarily presented in the first two years of work. The attention of students is also drawn to the literature of chemistry as developed in chemical publications.

Prerequisites: Quantitative and Organic Chemistry.

Class room, one meeting a week.

Senior year, both semesters. One hour each. A.

By the chemical teaching staff.

C19a, D19b. PHYSICAL CHEMISTRY. A survey of the whole subject is given, including the relation of mass to volume, phase relations, thermo-chemistry and thermodynamics, chemistry of solutions and the dissociation hypothesis, electro-chemistry, and optical chemistry. The laboratory work consists of the study of physico-chemical methods as related to the subject matter of the lectures.

Prerequisites: Quantitative and Organic Chemistry. Coll Physics and Analytic Geometry and Calculus must precede or company this course.

Class room, two hours a week; laboratory, one period a week.

Junior and Senior years, both semesters. 3 hours each. M, Laboratory, T, W or Th, 1:15-4:10.

Associate Professor Bartlett.

Laboratory fee, \$8.00.

D23-D24. **ADVANCED LABORATORY INVESTIGATION AND RESEARCH.** This course is open to a limited number of students who present the written certification of the instructor in charge as to adequacy of preparation and experience.

(a). **ORGANIC.** The work for 1919-1920 will be on inorganic compounds with aniline.

Professor Lyman.

(b). **PHYSICO-CHEMICAL.** Certain oxidation cells are to be studied. Considerable experience in laboratory manipulation will be required.

Associate Professor Bartlett.

CONSTITUTIONAL HISTORY

(See History.)

ECONOMICS AND SOCIOLOGY

B1a, B1b. **INTRODUCTION TO ECONOMICS.** An elementary course which covers the entire field. Conducted for those desiring a general knowledge of the subject, it lays the foundation for specialization in the department.

Sophomore and Junior years, both semesters. 3 hours each. I, V Assistant Professor Burgess.

B3. **PRINCIPLES OF ECONOMICS.** A rapid survey of the field covered in Economics B1, intended to meet the needs of mature students, particularly those specializing in other fields.

Junior and Senior years, first semester, 3 hours. VII.

Professor Sumner.

B31a, B31b. ACCOUNTING.

Sophomore and Junior years, both semesters. VII.

Assistant Professor Thomson.

C32a, C32b. ADVANCED ACCOUNTING.

Junior and Senior years, both semesters. VIII.

Assistant Professor Thomson.

C4. MONEY AND BANKING. The history and theory of money and banking, especially in their bearing on the practical problems of today.

Prerequisite: Economics B1 or B3.

Junior and Senior years, first semester. 3 hours. III.

Professor Sumner.

C5. BANKING AND FOREIGN EXCHANGE.

Junior and Senior years, second semester. 3 hours.

Professor Sumner.

(Not given in 1919-1920.)

C6. PUBLIC FINANCE. A study of taxation and other methods of meeting governmental expenditures in the light of both theory and practice. The budget, local and national taxation and public debts are among the subjects taken up.

Junior and Senior years, second semester. 3 hours. III.

Professor Sumner.

C8. PROBLEMS OF LABOR. The factory system, modern organization of labor, woman and child labor, labor legislation, workingmen's insurance, and other appropriate problems.

Prerequisites: Economics B1 or B3.

Junior and Senior years, second semester. 3 hours. II.

Professor Sumner.

C9. CORPORATION FINANCE. An examination of forms, methods of promotion, financing and legal status of corporations.

Prerequisites: Economics B1.

Junior and Senior years, first semester. 3 hours. II.

Assistant Professor Burgess.

D7. TRUST PROBLEMS. A study of the growth of modern methods of large scale production and distribution. Benefits and dangers of monopolies and of trusts. Public trusts, and other forms of combination considered, together with plans for their regulation.

Junior and Senior years, first semester. 3 hours.

Assistant Professor Burgess.

(Not given in 1919-1920.)

D10. RAILROAD TRANSPORTATION. A study of principal problems of land transportation, with particular attention to service, rates, securities and relation to government.

Junior and Senior years, first semester. 3 hours. VII.

Assistant Professor Burgess.

D11. INVESTMENTS. A study of the general principles of investment, together with an analysis of various government, municipal and corporate securities.

Prerequisite: Economics C9.

Junior and Senior years, second semester. II.

Assistant Professor Burgess.

D13. OCEAN TRANSPORTATION. A brief survey of the system and service, with a study of the principal problems of ocean transportation, including the relation of the government.

ment to ocean carriers. Particular attention will be given to the situation on the Pacific Coast.

Normally follows Economics D10.

Junior and Senior years, second semester. 3 hours. VII.

Assistant Professor Burgess.

12. SOCIAL PSYCHOLOGY.

(See Psychology D12.)

Junior and Senior years, second semester. 3 hours. VI.

Professor Ewer.

19a, D19b. APPLIED SOCIOLOGY. The work consists of first-hand study of local industrial and social problems, together with the reading and discussion of the latest literature treating of these subjects.

Junior year, both semesters. 1 hour each. W, V.

Professor Sumner.

16a, B16b. RED CROSS HISTORY AND MANAGEMENT. A study of the development of the Red Cross, and the history of its relief work in the various countries both in war and peace.

Sophomore and Junior years, both semesters. 1 hour each. F,

Assistant Professor Berry.

21a, B21b. ELEMENTS OF SOCIOLOGY. The development of society, its functions, institutions and forces. Illustrations are drawn from primitive society as well as from America of today.

Sophomore and Junior years, both semesters. 3 hours each. VI.

Professor Sumner.

C25. POOR RELIEF. An examination of the causes of pauperism and their remedy, the obligation of society and the methods of relief.

Junior and Senior years, first semester. 3 hours. II.

Professor Sumner.

C28. CITY PROBLEMS. The chief social and economic problems incident to modern city life. In addition to the general class work, each student is required to select some problem for special investigation.

Junior and Senior years, second semester. 3 hours. VII.

Professor Sumner.

C29. STATISTICS. An introductory study of the collection of data, their arrangement and their use.

Junior and Senior years, first semester. 3 hours.

D26. CRIMINOLOGY. A study of crime from the social point of view, including its cause and the treatment of the criminal. Normally follows Economics C25.

Junior and Senior years, second semester. 3 hours. II.

Professor Neely.

D27. THEORIES OF SOCIAL REFORM. From Plato's Republic to Modern Socialism. The principal schemes, Utopian and scientific, for the radical change of social organizations.

Junior and Senior years, first semester. 3 hours. IV.

Professor Sumner.

D30. IMMIGRATION. A study of the causes and effects of immigration. Special emphasis is given to the present-day American issues.

Junior and Senior years, second semester. 3 hours. IV.

Professor Sumner.

EDUCATION

For courses in General Psychology see the Department of psychology.

C7. EDUCATIONAL PSYCHOLOGY.

(See Psychology C7.)

Junior and Senior years, both semesters. VI.

Professor Ewer.

C11a, C11b. HISTORY OF EDUCATION. The course traces the methods and ideals of educational thought and practice as developed in various nations and periods. The history of education in the United States, and the problems now confronting all of our educational agencies, are given special attention during the second semester.

Junior and Senior years, both semesters. 3 hours each. VIII.

Professor Norton.

C15. SECONDARY EDUCATION. In this course an attempt is made to apply to high school instruction the same general principles that have been so fruitfully applied in the elementary school. Such problems as the selection and arrangement of subject matter, types of learning involved in high school subjects, provision for individual differences, supervised study, the measurement of results of teaching, etc., are considered.

Junior and Senior years, either semester. 3 hours.

Assistant Professor Nicholl.

D16. PUBLIC SCHOOL ADMINISTRATION. A study of the fundamental principles underlying the organization and administration of public education. Text, Cubberley's 'Public School Administration.' Lectures, assigned readings from government and state documents and educational magazines.

Junior and Senior years, second semester. 3 hours. VI.

Professor Williams.

D17. MENTAL MEASUREMENTS.

Junior and Senior years, first semester. 3 hours. III.
Professor Williams.

ENGINEERING

The College does not give at present a full technical course in engineering; but for students who contemplate engineering work wish also the foundation and culture of college training a course of studies has been arranged. Graduates who have followed this course complete their work for a degree in the standard schools of engineering and technology in two years.

A1a, A1b. GRAPHICS. A course in lettering and line drawing, including the use and care of the instruments; practice in lining and accurate constructions, geometrical problems and construction of geometrical curves.

Freshman year, both semesters. 2 hours each. Laboratory, VI and VII.

Assistant Professor Belcher.

In case a student offers for credit other work in Graphics instead of Engineering A1, the certificate of former work must be accompanied by the plates drawn and the instructor will judge whether the character and amount of work done are satisfactory. This must in every case include evidence of ability in lettering.

B3a, B3b. GRAPHICS. An introductory course in orthographic and isometric projections, shade lines and shadows.

Prerequisite: Engineering A1.

Sophomore year, two exercises a week, both semesters. 2 hours each. Laboratory, V and VII.

Assistant Professor Belcher.

B11a, B11b. SURVEYING. Class room work; field work with compass, transit, level and sextant; platting and computation from field notes; topographical surveying and map work (Gillespie; Johnson).

Prerequisites: Mathematics B7 and Engineering A1.

Sophomore year, both semesters. 3 hours. A.

Assistant Professor Belcher.

Woodford.

laboratory fee, \$3.00.

(not given in 1919-1920.)

DETERMINATIVE MINERALOGY. The rapid determination of minerals by their physical properties.

Laboratory, two periods a week.

Prerequisite: Chemistry A1 or equivalent.

It must be accompanied or preceded by Geology B1.

Open to Sophomore and Junior years, first or second semester. 2 hours.

Woodford.

Laboratory fee, \$4.00.

(not given in 1919-1920.)

MINERALOGY. Crystallography.

Laboratory room, two hours a week.

Prerequisite: Chemistry A1 or equivalent.

It must be preceded or accompanied by Geology B3.

Open to Sophomore, Junior and Senior years, first semester. 2 hours.

Woodford.

(not given in 1919-1920.)

DESCRIPTIVE MINERALOGY. The classification, paragenesis and uses of minerals; their identification and rock analysis.

Laboratory room, two hours a week; laboratory, one period a week.

Prerequisites: Courses B3 and C5.

Open to Sophomore, Junior and Senior years, second semester. 3 hours.

Woodford.

Laboratory fee, \$4.00.

(not given in 1919-1920.)

GERMAN

A, A1b. ELEMENTARY COURSE. Intended especially for freshmen who offer no modern language. By the continuous use of the language in the class room the student is trained from the outset to think in German. Thorough

drill in grammar and composition throughout the year ; memorizing of poetic and also prose selections ; reading of a considerable body of simpler stories and poems.

Freshman year, both semesters. 3 hours each. IV.
Assistant Professor Matlock.

A2a, A2b. INTERMEDIATE COURSE. Grammar, composition, reading of prose and poetry, memorizing of the latter.

Primarily for those entering with only one unit of recommended German. May be required of others who show special need of this type of drill given.

Freshman and Sophomore years, both semesters. 3 hours each. VI.

Assistant Professor Matlock.

B3a, B3b. PROSE NARRATIVE AND DRAMA. Reading of more advanced short stories or a novel, and a drama. Grammatical analysis, short essays in German on assigned topics, sight reading, discussion of text in German, the student being expected to grow in ability to use the language freely. Reading of selected ballads and other poems of Schiller, Lied von der Glocke, and Maria Stuart.

Prerequisite: German A1, or two years of elementary German. Freshman and Sophomore years, both semesters. 3 hours each. Professor Bissell.

(Not given in 1919-1920.)

B4a, B4b. GERMAN COMPOSITION. Simple prose narrative and conversation. Review of fundamentals of grammar.

May be required of those deficient in German.

Freshman and Sophomore years, both semesters. 1 hour each.

Associate Professor Churchill.

(Not given in 1919-1920.)

B6a, B6b. GERMAN COMPOSITION. Advanced narrative prose.

For students of good standing.

COURSES OF INSTRUCTION

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Freshman and Sophomore years, both semesters. 1 hour each.
Associate Professor Churchill.
(Not given in 1919-1920.)

C9a, C9b. GERMAN NOVEL OF THE NINETEENTH CENTURY. Lectures on the development of the German Novel, with readings from works of Haupt, Eichendorff, Freytag, Gerlach, Gerlach, Ludwig, Spielhagen, Keller, Storm, Frenssen.
Prerequisite: German B3, or equivalent.
Sophomore and Junior years, first semester. 3 hours. II.
Assistant Professor Matlock.

C10a, C10b. GERMAN COMPOSITION AND CONVERSATION. Required of those making German their major. Prerequisites: German B3, or equivalent, and German B6.
Sophomore and Junior years, both semesters. 1 hour each.
Professor Bissell.
(Not given in 1919-1920.)

C19. ADVANCED GERMAN PROSE. Reading of carefully selected addresses by Emperor William, Carl Schurz, von Helldorf, Bismarck and other men of note, and other selections which offer a rich and varied vocabulary in the general fields of political science, history, criticism and philosophy and science.
Prerequisite: German B3, or equivalent.
Sophomore and Junior years, first semester. 3 hours.
Assistant Professor Matlock.
(Not given in 1919-1920.)

C20. ADVANCED GERMAN PROSE. A continuation of German C19.
Prerequisite: German C19.
Sophomore and Junior years, second semester. 3 hours.
Assistant Professor Matlock.
(Not given in 1919-1920.)

C11. SCIENTIFIC GERMAN. Based on Hodge's C and Brandt and Day's Reader. Assignments from the v of scientific writers.

Intended primarily for those planning to do graduate work le to the degree of Doctor of Philosophy. Prerequisite: German or equivalent.

Junior and Senior years, second semester. 3 hours.

Professor Bissell.

(Not given in 1919-1920.)

D13. LESSING. Lectures on Lessing's life, works influence. Reading of his principal dramas and portion Laocoon and other prose works.

Junior and Senior years, first semesters. 3 hours. VII.

Professor Bissell.

(Not given in 1919-1920.)

D14. GOETHE. Lectures on Goethe's life, works place in literature, relation to Schiller. Reading of Fa Part I, and at least two other works.

Prerequisite: German D13.

Junior and Senior years, second semester. 3 hours.

Professor Bissell.

(Not given in 1919-1920.)

D15. OUTLINE COURSE IN THE HISTORY OF GERMAN I ERATURE AND LANGUAGE TO THE AGE OF LESSING. Lectu supplemented by assigned readings from the great medie epics.

Prerequisite: German C9, or equivalent.

Junior and Senior years, first semester. 3 hours.

Professor Bissell and Assistant Professor Matlock.

(Not given in 1919-1920.)

6. CONTINUATION OF D15 FROM LESSING TO THE DEATH OF GOETHE. Reading of representative works of Lessing, Schiller and Goethe.

Prerequisite: German D15.

Junior and Senior years, second semester. 3 hours.

Professor Bissell and Assistant Professor Matlock.

(Not given in 1919-1920.)

7. GERMAN COMPOSITION. Advanced course.

Required of all who desire the recommendation of the Department for Graduate Studies. Prerequisites: Two years of college German, including German C10.

Junior and Senior years, first semester. 3 hours.

Professor Bissell.

(Not given in 1919-1920.)

8. MODERN DRAMA. Lectures, assigned readings, and exercises.

Junior and Senior years, first semester. 3 hours.

Professor Bissell.

(Not given in 1919-1920.)

9. MODERN FICTION. A study of the fiction of the last twenty-five years. Lectures, assigned readings, papers.

Junior and Senior years, second semester. 3 hours.

Professor Bissell.

(Not given in 1919-1920.)

GREEK

A and B2. ELEMENTARY GREEK. A course designed for those wishing to begin the study of the language after entering college. The use of the "First Year of Greek," by J. T. Allen, insures a course well worth while, even if the subject is carried no further, and also makes it possible for those who complete the course with high grade to elect to take B2 and B3 in their second year.

Freshman and Sophomore years, both semesters. 3 hours each.

Assistant Professor Robbins.

B2a, B2b. GREEK COMPOSITION.

Required of those who make Greek their major.

Freshman and Sophomore years, both semesters. 1 hour each.

Professor Norton.

(Not given in 1919-1920.)

B3. LYSIAS. Selected orations (Morgan), with review of grammar and study of Greek life.

Freshman and Sophomore years, first semester. 3 hours. III.

Professor Norton.

B4. PLATO. Apology and Crito with selections from Phaedo (Kitchel). Homer, Odyssey, three or four books of grammar.

Freshman and Sophomore years, second semester. 3 hours. II.

Professor Norton.

C5. AESCHYLUS AND SOPHOCLES. Prometheus (Harry) and Oedipus the King (White). Translations of other tragedies read in class; study of Haigh's Greek Theater; essays.

Sophomore year, first semester. 3 hours.

Assistant Professor Robbins.

(Not given in 1919-1920.)

C6. DEMOSTHENES. Oration on the Crown (Humphreys); outline of Greek literature; sight reading.

Sophomore year, first semester. 3 hours. IX.

Professor Norton.

C7. HELLENISTIC GREEK. One of the Gospels and one of the Pauline Epistles; informal lectures on ancient manuscripts and the elements of textual criticism.

Alternates with Greek D9.

Junior and Senior years, first semester. 3 hours.

Professor Norton.

(Not given in 1919-1920.)

8. HOMER. Rapid reading of a number of books of Iliad or Odyssey; the Homeric question.

Alternates with Greek D10.

Junior and Senior years, second semester. 3 hours.

Professor Norton.

(Not given in 1919-1920.)

9. PLATO, PHAEDO AND PROTAGORAS. Outline of Greek philosophy.

Alternates with Greek C7.

Junior and Senior years, first semester. 3 hours.

Professor Norton.

(Not given in 1919-1920.)

10. THUCYDIDES. BOOKS VI AND VII.

Alternates with Greek D8.

Junior and Senior years, second semester. 3 hours.

Professor Norton.

(Not given in 1919-1920.)

11a, D11b. PROSE COMPOSITION AND SIGHT READING.

Required of all making Greek a major.

Junior and Senior years, both semesters. 1 hour each.

(Not given in 1919-1920.)

13a, B13b. GREEK LITERATURE AND LIFE. This course is open to those who have no knowledge of the Greek language. It is intended to give, through lectures and translations, some appreciation of the Greek genius and spirit, and the knowledge of the form and content of Greek literature. Though ordinarily a year course, it may, by special arrangement with the instructor, be taken for either semester.

Sophomore and Junior years, both semesters. 3 hours each. VI.

Professor Norton.

HISTORY

Those seeking a departmental major are required to take thirty hours of history, including History D30, or such equivalent as the department may prescribe.

A1a, A1b. GENERAL EUROPEAN HISTORY. An introductory outline course in which intensive study of selected periods is made. Intended to bring out modern historical methods.

Freshman year, both semesters. 3 hours each. I.

Associate Professor Westergaard and Assistant Professor Thomson.

B2a, B2b. EARLY EUROPEAN HISTORY. From the Fall of the Roman Empire in the West to the Congress of Westphalia (476-1648). Lectures and discussions, with exercise on the use of sources and methods of research.

Sophomore year, both semesters. 3 hours each.

Associate Professor Westergaard.

(Not given in 1919-1920.)

B3. ANCIENT CLASSICAL HISTORY. A history of more recent archeological investigation in the general field of ancient history, particularly of Greece.

Sophomore and Junior years, first semester. 3 hours. I.

Professor Stearns.

B4. ANCIENT CLASSICAL HISTORY. (Continued.) Special attention is given to Rome.

Sophomore and Junior years, second semester. 3 hours. I.

Professor Stearns.

B7. ENGLISH HISTORY TO 1783. An introductory survey, in which emphasis is laid upon historical method by the use of source problems and systematic theme writing.

Sophomore and Junior years, first semester. 3 hours. II.

Associate Professor Westergaard.

Not given, 1920-2

B8. THE BRITISH EMPIRE. Its rise and development. The rise of modern democracy in England and growth of British colonial empire; dependencies and self-governing colonies; federation and liberalism in the Empire.

Sophomore and Junior years, second semester. 3 hours. II.

Associate Professor Westergaard.

Not given, 1920-2

B25. CONTEMPORARY PROBLEMS. A combined reading and lecture course with special reference to present-day world questions, open to all classes.

Sophomore year, both semesters. 3 hours. VIII.

Mr. Marriott.

Drop

B26. CONTEMPORARY GOVERNMENTS. An introductory course dealing with the nature and relations of political science as illustrated in the organization and powers of modern contemporary governments.

Sophomore year, second semester. 3 hours. VIII.

Assistant Professor Robbins.

Drop

B21. ANCIENT ORIENTAL HISTORY. Babylonia, Assyria, Egypt.

(See Biblical History and Literature B21.)

B22. ANCIENT ORIENTAL HISTORY. Persia, Palestine.

(See Biblical History and Literature B22.)

C13. MODERN EUROPEAN HISTORY. From the Congress of Westphalia to the Congress of Vienna (1648-1875). of the Europe of sovereign states from divine right monarchy to democratic revolution and military despotism.

Junior year, first semester. 3 hours. VII.

Associate Professor Westergaard.

D14. MODERN EUROPEAN HISTORY. From the Congress of Vienna to the outbreak of the World War (1815-1914).

Junior and Senior years, second semester. 3 hours. VII.

Associate Professor Westergaard.

D27a, D27b. AMERICAN HISTORY. From the Peace of Paris (1763) to the present time. Lectures, with oral and written exercises, on the Westward movement of the American people, and the development of our social, economic and political institutions. *Passage, any one of 1763-1876*

Junior and Senior years, first and second semesters. 3 hours each. V.

Associate Professor Westergaard.

(Not given in 1919-1920.)

D29. EARLY AMERICAN CARTOGRAPHY AND EXPLORATION. Includes a careful study of interesting early maps and travel works of travel and exploration to be found in the Map Collection.

Prerequisite: Two years of college history.

Junior and Senior years, second semester. 2 hours. W, F, I.
Mr. Marriott.

D30. PRO-SEMINAR IN HISTORY.

Required of those seeking a departmental major in History open to other advanced students.

Senior year, first semester. 2 hours. W, F, IX.

Associate Professor Westergaard.

For classes in American Diplomacy, Colonial Government, Constitutional History, History of Religion and History of Education in the Departments of Law, Constitutional History, Biblical History and Literature, and Psychology.

CONSTITUTIONAL HISTORY

19. AMERICAN COLONIAL GOVERNMENT. This course is a study with particular reference to the government and administration of the individual American colonies and settlements. The ground covered is that of the French settlements, the Puritan colonies, Virginia, Maryland, and the Carolinas, the Middle colonies, the Dutch and Quaker colonies, Spanish and French settlements, and the Indians.

Intended to prepare students for the later courses in American Constitutional History and Comparative Constitutional History.

Sophomore and Junior years, first semester. 3 hours. II.

Professor Neely.

9a, D9b. COMPARATIVE CONSTITUTIONAL HISTORY.

With the English Constitution as a basis, comparison of the constitutions of European and American States is made. This gives a fair knowledge of present-day governments.

Junior and Senior years, both semesters. 3 hours.

Professor Neely.

(Not given in 1919-1920.)

11a, D11b. AMERICAN CONSTITUTIONAL HISTORY. In this course the principles of constitutional law are taught, constitutional questions discussed and constitutional cases examined.

Prerequisite: A course in American History.

Junior and Senior years, both semesters. 3 hours each. IV.

First semester, Professor Neely.

ITALIAN

(See Romance Languages.)

LATIN

A1a, A1b. **ELEMENTARY LATIN.** A course intended for those desiring to begin the study of the language as they enter college. Grammar, composition, and readings from Caesar's Gallic War.

Freshman year, both semesters. 3 hours each. II.

Professor Colcord.

A2a, A2b. **VERGIL AND CICERO.** Selections from Aeneid and the Orations of Cicero.

Prerequisite: Latin A1a, A1b or equivalent.

Freshman and Sophomore years, both semesters. 3 hours each. VII.

Assistant Professor Robbins.

B3. **CICERO AND LIVY.** Cicero; (Kelsey) De Senectute and De Amicitia; Livy; (Westcott) Books XXI and XXII; selections; written translations, collateral reading, sight reading.

Freshman year, first semester. 3 hours. VI.

Professor Colcord.

B5. **HORACE.** (Bennett) Odes, Epodes, Carmen Saeculare; Horatian meters; written translations, collateral reading, sight reading.

Freshman year, second semester. 3 hours. VI.

Professor Colcord.

B4a, B4b. **LATIN COMPOSITION.**

Required of all making Latin their major.

Freshman year, both semesters. 1 hour each. A.

Professor Colcord.

7a, B17b. **ROMAN LIFE AND LITERATURE.** A course to those who have no knowledge of the Latin language. During the first semester special emphasis is laid upon the social institutions and life, both public and private, of the Roman people. In the second semester the literature is studied through the medium of lectures, assigned readings and translations. This course is designed particularly for students majoring in Latin, the Romance languages, Political Science and Law.

sophomore and Junior years, both semesters. 3 hours each. III.
 Assistant Professor Robbins.

. **PLINY.** (Westcott) Letters, Tacitus, (Gudeman) Germania and Germania. Collateral readings, history of Roman satire.

sophomore year, first semester. 3 hours. IV.
 Professor Colcord.

. **PLAUTUS.** Captivi, Trinummus, Terence, Adelphoi, Menidia. Collateral readings, study of early Roman comedy and fragments of early Latin.

sophomore year, second semester. 3 hours. IV.
 Professor Colcord.

a, C8b. **LATIN COMPOSITION.** Connected narrative.

required of all making Latin their major. Prerequisite: Latin B4.
 sophomore year, both semesters. 1 hour each. A.
 Professor Colcord.

. **CICERO.** Letters, Tusculan Disputations. Roman orators; Persius, Martial and Juvenal, selections. History of Roman satire.

sophomore and Senior years, first semester. 3 hours.
 Professor Colcord.
 (Not given in 1919-1920.)

D10. CATULLUS; LUCRETIUS; TIBULLUS; PROPERTIUS;
OVID; LUCAN (Crowell.) Selections. Topics in outline
Roman literature.

Junior and Senior years, second semester. 3 hours.

Professor Colcord.

(Not given in 1919-1920.)

D11. TACITUS. Histories and Annals.

Junior and Senior years, first semester. 3 hours. VIII.

Professor Colcord.

D12. VERGIL. Bucolics and Aeneid, Books VII-X
Ovid. Selections. Christian and Latin Hymns.

Junior and Senior years, second semester. 3 hours. VIII.

Professor Colcord.

D14a, D14b. LATIN COMPOSITION. Original papers.

Required of those making Latin their major: Prerequisite
Latin C8.

Junior and Senior years, both semesters. 1 hour each. A.

Professor Colcord.

D15a, D15b. SPECIAL LATIN.

Adapted to the needs of the individual student. Required
those seeking a departmental major in Latin.

Senior year, both semesters. 3 hours each.

Professor Colcord.

(Not given in 1919-1920.)

LAW

B1a, B1b. ELEMENTARY LAW. First semester, Black
stone; second semester, Contracts.

Junior and Senior years, both semesters. 3 hours each. I.

Professor Neely.

C3. PLEADING.

Junior and Senior years, first semester. 3 hours. VI.

Professor Neely.

4. EVIDENCE.

Junior and Senior years, second semester. 3 hours. VI.
Professor Neely.

17. AMERICAN DIPLOMACY. A study is made in this course of the history of the foreign relations of the American Colonies under the Continental Congress, and an examination of the important treaties of the United States. Establishment, organization and history of the Department of State.

Junior and Senior years, first semester. 3 hours. VIII.
Professor Neely.

18. INTERNATIONAL LAW. In this course a study is made of the principles and rules of law that have been adopted for the conduct of international affairs by consenting nations.

Junior and Senior years, second semester. 3 hours. VIII.
Professor Neely.

MATHEMATICS

The courses in Mathematics designated A1, A2, B3, B4, A5 and B6 are intended primarily for Freshmen. Students who enter with credit for three and a half or four units of commended work in Mathematics, including solid geometry and trigonometry, may take Mathematics B6, B7 or B13. Mathematics B7 is required of students in Engineering. Students who wish to take further work in Mathematics, but who have not sufficient preparation for Mathematics B7 or B13, may take Mathematics A1 and A2, or B3a and B3b, or A4 and A5, according to their preparation and need. Mathematics A5a and A5b are intended primarily for those who do not expect to take further work in the subject.

1. SOLID GEOMETRY. The geometry of space with original exercises and problems.

Freshman year, second semester. 3 hours. IV.
Professor Stearns.

A2. PLANE TRIGONOMETRY. Essential principles and applications to problems in surveying.

Freshman year, second semester. IV.

Professor Stearns.

B3a, B3b. ALGEBRA. Review of fundamental notions and operations, quadratic equations, ratio, proportion and variation, commensurable, incommensurable, and imaginary numbers, progressions, permutations and combinations, binomial theorem, series, undetermined coefficients, logarithms, determinants, theory of equations.

Freshman year, both semesters. 3 hours each. V.

Associate Professor Russell.

A5a, A5b. ELEMENTARY ANALYSIS. A theoretical and historical study of some of the most interesting principles of mathematical analysis.

Freshman year, two divisions, both semesters. 3 hours each. III, V.

Assistant Professor Berry.

A4. ALGEBRA. A semester course in second year algebra designed for those who have studied algebra only a year.

Freshman year, two divisions, first semester. 3 hours. III, VII.

Associate Professor Russell.

B6. ADVANCED AND SPHERICAL TRIGONOMETRY. A general course, with applications in geodesy and astronomy.

Prerequisite: Plane trigonometry.

Sophomore and Junior years, first semester. 3 hours.

Associate Professor Russell.

(Not given in 1919-1920.)

B7a, B7b. ANALYTIC GEOMETRY AND CALCULUS. A course designed especially for students of physics and engineering.

Freshman and Sophomore years, both semesters. 3 hours each. VI.

Professor Brackett.

B13a, B13b. ANALYTIC GEOMETRY AND CALCULUS. An elementary course in the principles of co-ordinate geometry and the introduction to the differential calculus.

Designed to follow Mathematics A1 and A2, B3 or A4 and A2.

Sophomore year, both semesters. 3 hours each. VI.

Associate Professor Russell.

C8a, C8b. ADVANCED ANALYTIC GEOMETRY AND CALCULUS. A continuation of B7a, B7b. Fundamental processes of integration with applications to analytic geometry and mechanics; functions of several variables and space co-ordinates; partial differentiation; differential equations.

Sophomore and Junior years, both semesters. 3 hours each.

Assistant Professor Belcher.

(Not given in 1919-1920.)

C15a, C15b. DIFFERENTIAL AND INTEGRAL CALCULUS. A continuation of Mathematics B13a, B13b.

Junior year, both semesters. 3 hours. VII.

Associate Professor Russell.

D19. THEORY OF EQUATIONS. Analysis and solution of higher algebraic equations; review of determinants with elementary reductions and processes, elimination and linear transformations.

Junior and Senior years, first semester. 3 hours. IV.

Associate Professor Russell.

D20. DIFFERENTIAL EQUATIONS. A general course the theory and solution of differential equations.

Junior and Senior years, second semester. 3 hours. IV.
Associate Professor Russell.

D21a, D21b. HIGHER ANALYSIS. The content of the course differs from year to year. Its object is to furnish introduction to the realm of higher mathematics, and develop still further independence and power in sound mathematical reasoning.

Junior and Senior years, both semesters. 3 hours each.
Professor Brackett.
(Not given in 1919-1920.)

D27a, D27b. PROJECTIVE GEOMETRY. A deductive study of general projective geometry with attention to the foundations of geometry.

Junior and Senior years, both semesters. 3 hours each. A.
Professor Brackett.

MILITARY TRAINING

A1a, A1b. DRILL AND TACTICS.

Freshman year, both semesters. $1\frac{1}{2}$ hours each. M, 1:15-3:15;
F, 2:15.

Major Vogdes and Assistant.

B3a, B3b. DRILL AND TACTICS.

Sophomore year, both semesters. $1\frac{1}{2}$ hours each. M, 1:15-3:15;
F, 2:15-3:10.

Major Vogdes and Assistants.

C5a, C5b. DRILL AND TACTICS.

Prerequisite: Military B3.

Junior and Senior years, both semesters. $1\frac{1}{2}$ hours each. A.
Major Vogdes.

MUSIC

HISTORY AND THEORY OF MUSIC

courses in the History and Theory of Music are granted credit on the same basis as other college studies, and proficient students may major in either theoretical or applied music under conditions arranged in consultation with the head of the department.

1a, A1b. ELEMENTARY MUSIC AND EAR TRAINING. Course dealing with the rudiments of music, including notes, rests, rhythm, intervals, scales and definitions of terms. Extended work in ear-training, aiming to teach discrimination of pitch and rhythm. Elementary work in Harmony is undertaken in the second semester. A text is used.

Free recitations to count as two hours.

Freshman and Sophomore years, two divisions, both semesters. 3 hours each. II, XI.

Prof. Russell.

3a, B3b. MUSICAL HISTORY AND APPRECIATION. Lectures and recitations are given on the development of music from its earliest stages. The history of church music, of opera, and oratorio; biographical sketches of famous composers, with description of their principal works. Recitals, and in appreciation, are given frequently. A text-book is used.

Sophomore year, both semesters. 3 hours each. XI.

Assistant Professor Allen.

5a, B5b. HARMONY. A study of intervals, scales, chords and construction and their relation. An abundance of excerpts are examined. Especial emphasis is laid upon the harmonization of melodies, as well as practical application on the key-board of the principles involved. Creative work

is encouraged from the beginning. The text by Carolyn A. Alchin is used.

Prerequisite: Music A1, and an elementary knowledge of the pianoforte.

Sophomore and Junior years, both semesters. 3 hours each. VII.

Assistant Professor Allen.

C6a, C6b. APPLIED HARMONY. This course applies at the keyboard the principles taught in Music B5.

Prerequisite: Music B5.

Junior year, both semesters. 2 hours each. V.

Assistant Professor Allen.

(Not given in 1919-1920.)

C7a, C7b. COMPOSITION I. A study of Simple Counterpoint of all species in two, three and four voices. The aim is to develop technique in smooth voice leading. Creative work in the simpler forms of Free Composition is added in the second semester.

Prerequisite: Music B5.

Junior and Senior years, both semesters. 3 hours each. V.

Assistant Professor Allen.

D8a, D8b. COMPOSITION II. Original work leading up to the Sonata form constitutes the basis of this course.

Prerequisite: Music C7.

Junior and Senior years, both semesters. 3 hours each.

Assistant Professor Allen.

(Not given in 1919-1920.)

C12. MUSICAL APPRECIATION. Designed to enable students to understand and enjoy the different forms of musi-

composition. Lectures are supplemented by outside playing and abundant musical illustrations.

Junior and Senior years, second semester. 3 hours.

(Not given in 1919-1920.)

C13a, C13b. ORCHESTRATION. A study of orchestral instruments, their possibilities and limitations, arranging of compositions for small orchestra, the theory and practice of conducting.

Designed especially to meet the needs of a student desiring the Certificate.

Junior and Senior years, both semesters. 3 hours each. XIII.

Assistant Professor Allen.

APPLIED MUSIC

Any student may take work in Applied Music, but is enrolled for it only upon the written recommendation of the Chairman of the Examining Committee and the Head of the Department concerned, and upon the subsequent favorable action of the Classification Committee. This recommendation and the action of the committee are based upon the degree of ability shown in proficiency tests. (See the Bulletin.) Work in Applied Music to receive credit must be accompanied with a minimum of two half-hour lessons weekly and must be accompanied or preceded by the theoretical courses A1 and A2. Under these conditions the applied work is rated as two hours each semester. Not more than ten such hours may be counted toward the degree.

Voice—Professor Lyman and Miss Pasmore.

Piano—Assistant Professor Hartley.

Organ—Assistant Professors Hartley and Colburn, Miss West and Miss Russell.

Stringed Instruments and Ensemble—Assistant Professor Zoellner.

PHILOSOPHY

In keeping with the requirements of those who plan to become graduate students of Philosophy, certain courses are offered, once each semester, in which the spirit of independent research is encouraged, and methods of specialized study are within certain limits employed. Except by consent of the department, registration in these courses is limited to students whose major is Philosophy.

B21. LOGIC. The course is designed to be an introduction to the essentials of reasoning. Stress is laid upon exercises in logical construction, the detection of fallacies, and upon conception and classification. Induction and deduction in their relations, as employed in scientific research. Text recitations, lectures and written assignments.

Sophomore and Junior years, first semester. 3 hours. IV.
Professor Williams.

B23. THE ELEMENTS OF ETHICS. The origin and development of moral ideas. The relation of these ideas and their development to civilization, with especial reference to their bearing upon the relation of the individual to society. The problems considered are those of goodness, evil, duty, freedom, conscience, the nature of the self, and the supreme good. Lectures, required readings and theses.

Prerequisite: Psychology B1. Required of all not taking Philosophy C24.

Junior year, either semester. 3 hours. V.
Assistant Professor Nicholl.

C24. THE PRINCIPLES OF ETHICS. A course designed for more advanced students of philosophy.

May be substituted for Philosophy B23 by those students who make Philosophy their major, and likewise by other students of

oved preparation. May also be taken as an elective by students have completed B23. Lectures and theses.

ior and Senior years, first semester. 3 hours. VI.

ofessor Williams.

25. ANCIENT AND MEDIEVAL PHILOSOPHY. Lectures, ings of fragments of early Greek philosophers, and ted readings from the writings of Plato and Aristotle. extended thesis treating of some fundamental problem ncient philosophy. Text, Rogers' "A Student's History hilosophy."

ior and Senior years, first semester. 3 hours. VII.

ofessor Williams.

26. MODERN PHILOSOPHY. Text, lectures and assigned ings from modern philosophers including Descartes, niz, Locke, Berkeley, Hume and more recent thinkers. rs' text; Rand's "Classical Philosophers;" Royce's e Spirit of Modern Philosophy," and Calkin's "The istent Problems of Philosophy."

ior and Senior years, second semester. 3 hours. VII.

ofessor Williams.

27. INTRODUCTION TO PHILOSOPHY. Designed to liarize the student with the outlines, divisions and meth- of procedure in the several branches of philosophical ry.

ior and Senior years, first semester. 3 hours.

ofessor Williams.

pt given in 1919-1920.)

28. METAPHYSICS. An inquiry for the fundamental eptions of philosophy.

ior and Senior years, second semester. 3 hours.

ofessor Williams.

pt given in 1919-1920.)

D29. PHILOSOPHY OF RELIGION. A study of the origin and nature of religion. The philosophical grounds for religious view of the world. The study of the development of religion in its relation to other fields of human knowledge, with special reference to their illustration by the religion of Israel and its culmination in Christianity.

Junior and Senior years, second semester. 3 hours. A.
Professor Williams.

D30. CONTEMPORARY PHILOSOPHY. An effort to state the prominent tendencies in present-day thinking, and relate them to their proper historical sources.

Junior and Senior years, first semester. 3 hours.
(Not given in 1919-1920.)

D31. INTRODUCTION TO CONTEMPORARY PHILOSOPHY.

Junior and Senior years, first semester. 3 hours.
Professor Ewer.

PHYSICAL EDUCATION

A course of Physiology and Hygiene, described under the Department of Physiology as A1, Applied Physiology and Hygiene, is required of all. The courses are graded, systematic and progressive. Their purpose is to remedy ordinary physical defects, and develop endurance and co-ordination.

Courses A1 to C8, inclusive, and C31 are for men. Physical measurements are taken at the beginning and end of Freshman and Sophomore years, and are optional for Juniors and Seniors. They are designed primarily to determine vital strength and organ weakness, secondarily to determine muscular strength. The measurements obtained are plotted on anthropometrical tables to determine development and comparison with the average. Any individual who is below normal is given prescribed exercise.

a, A1b. ELEMENTARY GYMNASTICS*. Calisthenics, A. Regulations without arms: dumbbell, wand and In-club drills; exercise on horizontal bar, parallel bars, side, long horse, bucks, ladders, etc. The closing minutes of each class period are devoted to the teaching and playing of games. Two class exercises per week.

Freshman year, both semesters. $\frac{1}{2}$ hour each. A. Assistant Professor Schott.

a, A2b. SPORTS. Two periods of outdoor exercise are selected by the student in consultation with the director. Reserved for Freshmen not taking Military Drill.

Freshman year, both semesters. $\frac{1}{2}$ hour each. A. Assistant Professor Schott and Assistants.

c, B3b. ADVANCED GYMNASTICS*. This course follows Gymnastics A1 and A2, and takes up more advanced exercises, including mat work, tumbling, advanced apparatus and athletic and gymnastic dancing.

Required, Sophomore year, both semesters. $\frac{1}{2}$ hour each. A. Assistant Professor Schott.

c, B4b. SPORTS. Two periods of outdoor exercise are selected by the student in consultation with the director. Reserved for Sophomores not taking Military Drill.

Sophomore year, both semesters. $\frac{1}{2}$ hour each. A. Assistant Professor Schott and Assistants.

c, C5b. SPORTS. Two periods of outdoor exercise in football or other exercises to be elected by the student in consultation with the director, with lectures on social hygiene. Junior year, both semesters. $\frac{1}{2}$ hour each. T, F, at 5:00. Assistant Professors Schott and Nixon.

Students who are men in athletics are, upon recommendation of the coach, excused from actual participation in gymnastics during the period covered by the football or other sport in which they are engaged.

C7a, C7b. SPORTS. Two periods of outdoor exercise in games or walking as in C5, with lectures on hygiene and related to heredity and eugenics.

Senior year, both semesters. $\frac{1}{2}$ hour each. A.

Assistant Professors Schott and Nixon.

C31a, C31b. THEORY OF ATHLETICS. The various athletic sports, football, basketball, baseball and track athletics are discussed from the standpoint of coaching, training and officiating. Every student is given some practical work in the technique of coaching and officiating. The course is elective, and is especially designed for students who expect to coach high school athletics incidental to their teaching.

Open to Senior men only, both semesters. 2 hours each. A.
Assistant Professor Schott.

The work for women is at once educative and practical in its aims, endeavoring not only to correct abnormalities of structure and function, but to prevent their occurrence. Physical and medical examinations are required of all entering students; the physical examination is repeated at the end of the year.

A11a, A11b. GYMNASIUM PRACTICE. Two periods of gymnasium work.

Required, Freshman year. $\frac{1}{2}$ hour each. M, Th, at 3:15, or M, Th, at 4:15.

Assistant Professor Squire and Miss Goodrich.

A12a, A12b. OUTDOOR SPORTS. Two periods of outdoor sports, elected by the student subject to the approval of the director.

Required, Freshman year. $\frac{1}{2}$ hour each.

Assistant Professor Squire and Miss Goodrich.

B13a, B13b. GYMNASIUM PRACTICE. A continuation of B11. Two periods, following the general arrangement of B11.

Required, Sophomore year. $\frac{1}{2}$ hour each. M, Th, at 5:15.

Assistant Professor Squire and Miss Goodrich.

B14a, B14b. OUTDOOR SPORTS. A continuation of A12. Two periods following the plan of A12.

Required, Sophomore year. $\frac{1}{2}$ hour each.

Assistant Professor Squire and Miss Goodrich.

C15a, C15b. SPORTS. Two periods of outdoor sports selected by the student, subject to the approval of the director; from October 1 to June 1.

Junior year. $\frac{1}{2}$ hour each.

Assistant Professor Squire and Miss Goodrich.

C17a, C17b. SPORTS. Two periods of outdoor sports in C15, with lectures on hygiene as related to heredity and eugenics.

Senior year. $\frac{1}{2}$ hour each.

Assistant Professor Squire.

B19. FOLK AND NATIONAL DANCING. One period; from November 1 to May 1.

Elective for Freshmen and Sophomores. $\frac{1}{2}$ hour.*

Assistant Professor Squire.

C21. FOLK AND NATIONAL DANCING. One period; from November 1 to May 1.

Prerequisite: Physical Education B19, or its equivalent.

Elective for Sophomores, Juniors, and Seniors. $\frac{1}{2}$ hour.*

Assistant Professor Squire.

C23. AESTHETIC DANCING. One period; from November 1 to May 1.

Prerequisite: Physical Education C21, or its equivalent.

Elective for Juniors and Seniors. $\frac{1}{2}$ hour.*

Assistant Professor Squire.

* The half hour credit for these courses does not count toward the 126 credits required for graduation.

C25. GYMNASIUM PRACTICE. One period; from November 1 to May 1.

Prerequisites: Physical Education A11 and B13, or their equivalent.

Elective for Juniors and Seniors. $\frac{1}{2}$ hour.*

Assistant Professor Squire.

Forty minutes constitutes a period. B19, C21, C23, C25, or Swimming may be substituted for one period of out-door exercise. Hours and credits given for these courses may not be used in the requirements for graduation.

C33a, C33b. PLAY GROUND METHODS. Theory and philosophy of play. Equipment, construction and management of city and rural play grounds.

Elective, one hour each week. Students taking this course will be required to teach the various playground activities.

Junior and Senior years, both semesters. 2 hours each. F, IX; M, 1:15-4:15.

Assistant Professor Schott.

Laboratory fee, \$2.50 each.

PHYSICS

A1a, A1b. ELEMENTS OF PHYSICS. This course is designed for those having had no previous work in the subject.

Prerequisites: Elementary Algebra and Plane Geometry. Classroom, three hours a week; laboratory, one hour a week.

Freshman and Sophomore years, both semesters. 4 hours. Classroom, IV; laboratory, T, 1:15-4:10.

Professor Hitchcock.

Laboratory fee, \$4.00 each.

A2a, A2b. GENERAL PHYSICS. A course more advanced than Physics A1a, meeting the physics requirements of

*The half hour credit for these courses does not count toward the 126 credits required for graduation.

courses in medicine, chemistry and civil engineering. It may be successfully pursued without any previous course in the subject; a preliminary course in High School Physics is very desirable.

Prerequisites: Algebra through Quadratics, Plane Geometry and Plane Trigonometry. Class room, four hours a week; laboratory, one period a week.

Freshman and Sophomore years, both semesters. 5 hours. Class room, III and W, IX; laboratory, Th, 1:15-4:10.

Professor Hitchcock.

Laboratory fee, \$4.00 each.

C5a, C5b. MAGNETISM, ELECTRICITY AND LIGHT.

Sophomore and Junior years, both semesters. 3 hours. I.

Professor Hitchcock.

C9a, C9b. PHYSICAL MEASUREMENTS. An exposition of the theory and methods of physical measurements; instruction and practice in the adjustment and use of instruments of precision in the various branches of the subject.

Junior and Senior years, both semesters. 2 hours each. A.

Professor Hitchcock.

Laboratory fee, \$8.00 each.

C10c. MAGNETISM AND ELECTRICITY.

Junior and Senior years, first semester. 2 hours. A.

Professor Hitchcock.

D11a, D11b. ADVANCED MAGNETISM AND ELECTRICITY. A theoretical discussion of the subject; combined with a study of the more important applications in electrical engineering.

Prerequisites: Elementary Mathematics, Analytic Geometry, Differential and Integral Calculus.

Junior and Senior years, first semester. 3 hours.

Professor Hitchcock.

(Not given in 1919-1920.)

D13a, D13b. APPLIED MECHANICS. Same as Engineering D13.

Junior and Senior years, both semesters. 3 hours each.

Assistant Professor Belcher.

PHYSIOLOGY

A1a, A1b. APPLIED PHYSIOLOGY AND HYGIENE. A general course in the essentials of personal hygiene, with such brief excursions into the field of physiology as are necessary to an understanding of the hygienic principles involved. Supplementing this study of the problems of the individual, there is included a survey of the principles of public hygiene and sanitation, and a brief résumé of the most approved measures concerned in first aid to the injured.

Freshman year, both semesters. 1 hour each. Women, M, F, IX; Men, T, VIII, F, IX.

Assistant Professors Schott and Squire.

B11. PUBLIC HYGIENE. Advanced course. A series of lectures on the principles and requirements of public sanitation, and the problems of general morbidity and mortality.

Required of all Juniors, second semester. A.

Associate Professor Stoughton.

B13. PROBLEMS OF HEREDITY AND EUGENICS, AND RELATED QUESTIONS OF PERSONAL AND PUBLIC HYGIENE. Advanced course.

Required of all Seniors, first semester. A.

Associate Professor Stoughton and Assistant Professor Squire.

B3a, B3b. ANATOMY AND PHYSIOLOGY. Human and comparative. Lectures and laboratory work. Parts and organs studied and compared with the same in the lower vertebrates. Azoux models, preserved specimens and organs, and skeletons are used. Careful drawings by each student of sections, tissues and organs. (Gray, Quain, Stewart, Howells, Mivart, Reighard, Jennings, and other works of reference.)

Class room, two hours a week; laboratory, one exercise a week. Sophomore and Junior years, both semesters. 3 hours each. Class room, T, Th, VIII; laboratory, Th, 1:15-4:10.

Assistant Professor Schott.

Laboratory fee, \$3.00 each.

D5. HISTOLOGY. Vertebrate. The microscopic study of cells, tissues and organs of man and the higher vertebrates. Special attention given to methods. Those intending to study medicine after graduation will find this course and the course in embryology very helpful.

Prerequisite: Physiology B3 and B4.

Junior and Senior years, first semester. 3 hours.

Professor Hilton.

Laboratory fee, \$8.00.

(Not given in 1919-1920.)

D6. HISTOLOGY. A continuation of D5, including the consideration of some special methods and problems.

Prerequisite: Physiology D5.

Junior and Senior years, second semester. 3 hours.

Professor Hilton.

Laboratory fee, \$7.00.

D7. EMBRYOLOGY. Comparative vertebrate embryology. A study of the development of vertebrates up to and including the formation of adult organs. The eggs of amphibia,

the embryos of birds and mammals, furnish the material for the study.

Prerequisite: Physiology B3, or Zoology B11.

Junior and Senior years, first semester. 3 hours. A.

Professor Hilton.

Laboratory fee, \$8.00.

(Not given in 1919-1920.)

D8. EMBRYOLOGY. A continuation of D7. Some attention may be given to special methods and problems.

Prerequisite: Physiology D7.

Junior and Senior years, second semester. 3 hours. A.

Professor Hilton.

Laboratory fee, \$7.00.

(Not given in 1919-1920.)

PSYCHOLOGY AND EDUCATION

B1. ELEMENTS OF PSYCHOLOGY. A general view of the field of psychology, its aim, methods, values, relations, and its application to practical conduct. Class and individual experiments to illustrate and supplement the text. Text-book, lectures, recitations and laboratory work.

Required in all courses.

Sophomore or Junior year, either semester. 3 hours. V.

Professor Ewer.

B3a, B3b. PRINCIPLES OF PSYCHOLOGY. This course is intended for those students who desire a more extended study of psychology along the lines of B1. More emphasis is laid upon the comparative study of different systems and upon the results of experimentation. Text-book, lectures, reports and laboratory work.

Those who take this course fulfill the three-hour requirement in Psychology and get three hours in addition.

Sophomore or Junior year, both semesters. 3 hours each. IV.

Professor Ewer.

C7. EDUCATIONAL PSYCHOLOGY. A course in the practical application of psychology to the educative process, the theories of the functions of education and the laws which govern the educative procedure. The topics are treated in the light of modern psychological and physiological investigations, and the course is intended for those going into the professions of teaching and the ministry. Text-book, lectures and assigned readings.

Prerequisite: Psychology B1.

Junior and Senior years, first semester. 3 hours. VI.

Professor Ewer.

C8. APPLICATIONS OF PSYCHOLOGY. A study of the bearing of psychology on certain practical aspects of life, especially health and disease, work and recreation. Particular applications to the fields of business, law and the ministry will also be considered. Text-book, lectures and collateral readings.

Prerequisite: Psychology B1 or B3.

Junior and Senior years, second semester. 3 hours. III.

Professor Ewer.

D6. THE PSYCHOLOGY OF SUGGESTION. A study of the phenomena of suggestion in normal and abnormal individual and social life. Textbook, lectures, collateral reading and exercises.

Prerequisite: Psychology B1 or B3.

Junior and Senior years, second semester. 3 hours.

Professor Ewer.

(Not given in 1919-1920.)

D12. SOCIAL PSYCHOLOGY. The psychological principles underlying social order and progress; the social instincts; forms of social suggestion; the psychology of the

crowd and of organized groups ; applications of principles to contemporary social problems.

Junior and Senior years, second semester. 3 hours. VI.
Professor Ewer.

D17. MENTAL MEASUREMENTS.

Junior and Senior years, first semester. 3 hours. III.
Professor Williams.

D18. EXPERIMENTAL PSYCHOLOGY. A laboratory course in scientific methods as applied to mental processes. A continuation of the course in Mental Measurements. Lectures assigned readings and laboratory. Students are encouraged to undertake individual investigations in recent experimental fields.

Junior and Senior years, second semester. 3 hours. III.
Professor Williams.

ROMANCE LANGUAGES

FRENCH

A1a, A1b. ELEMENTARY. Aldrich and Foster's Elementary French. Easy prose and poetry, including selections from Daudet, Theuriet, Coppée and others ; composition, dictation and sight reading throughout course.

Freshman and Sophomore years, both semesters. 3 hours each
I, II, VIII.

Miss Gaylord, Miss Anderson, Mrs. Heacox.

A2a, A2b. INTERMEDIATE. Grammatical review ; selected readings from the easier modern authors ; sight reading and dictation.

Prerequisite: One year of high school or one semester of college French, or equivalent.

Freshman and Sophomore years, both semesters. 2 hours each.
I, F, III.

Professor Jones.

B3a, B3b. FRENCH NOVEL OF THE NINETEENTH CENTURY. Selections from Hugo, Balzac, De Vigny, Sand and other novelists of the period; lectures and essays in French; conversation.

Prerequisite: French A1 and A2, or equivalent.

Freshman and Sophomore years, both semesters. 3 hours each.
III, VIII.

Miss Gaylord, Miss Anderson, Mrs. Heacox.

B4a, B4b. GRAMMATICAL ANALYSIS. A course in French composition and conversation, required of those making Romance Languages their major.

Prerequisite: French A1 or A2, or equivalent.

Freshman and Sophomore years, both semesters. 2 hours each.
V, F, III.

Mrs. Heacox.

C7. CLASSIC DRAMA. Critical study of plays of Corneille, Racine and Molière; lectures upon the literary history of the period. This course, and all to follow, conducted entirely in French.

Prerequisite: French B3, or equivalent.

Junior and Senior years, first semester. 3 hours. V.

Professor Jones.

C8. SEVENTEENTH CENTURY PROSE. Selections from Descartes, Pascal, La Bruyère, Mme. de Sévigné, and others; essays and lectures upon the literary history of the period.

Prerequisite: French B3, or equivalent.

Junior and Senior years, second semester. 3 hours. V.

Professor Jones.

D9. LITERATURE OF THE EIGHTEENTH CENTURY. Selections from Montesquieu, Voltaire and Rousseau; plays Beaumarchais; Le Sage. Lectures upon the literary history of the period.

Alternates with French D11.

Prerequisites: French C7 and C8.

Junior and Senior years, first semester, 3 hours.

Professor Jones.

(Not given in 1919-1920.)

D10. ROMANTIC SCHOOL. Readings from Chateaubriand, Hugo, Alfred de Musset, Lamartine, and others. Lectures upon the significance and influence of the Romantic movement.

Alternates with French D12.

Prerequisites: French C7 and C8.

Junior and Senior years, second semester. 3 hours. V.

Professor Jones.

(Not given in 1919-1920.)

D11. LITERATURE OF THE RENAISSANCE. Rabelais and Calvin; the poetry of Marot; lectures upon the history of French literature; collateral readings and themes.

Alternates with French D9.

Prerequisites: French C7 and C8.

Junior and Senior years, first semester. 3 hours. I.

Associate Professor Matlock.

D12. RONSARD TO MALHERBE. La Pléiade; Du Bellay and the "Défense et Illustration"; selections from Montaigne. Lectures upon the history of French literature; collateral readings and themes.

Alternates with French D10.

Prerequisites: French C7 and C8.

Junior and Senior years, second semester. 3 hours. I.

Associate Professor Matlock.

(Not given in 1919-1920.)

D13a, D13b. CONTEMPORARY FRENCH NOVEL. Critical study of the most modern movement in French prose. Selected readings from Loti, Bourget, Rolland, De Coulevain, Bazin, Prévost, Barrès, Tinayre, the Tharauds, and others. Prerequisites: C7 and C8. (This course may be elected only on written consent of head of department.)

Junior and Senior years, both semesters. 3 hours each.

(Not given in 1919-1920.)

D14a, D14b. PHONETICS AND FRENCH CONVERSATION. The study of French sounds. An advanced course in French pronunciation. Geddes, French Pronunciation; Passy, Lectures sur l'articulation mises en transcription phonétique; Passy-Rambau, Phonétique française.

Prerequisites: French C7 and C8, and must be accompanied by D9 and D10 or D11 and D12.

Junior and Senior years, both semesters. 2 hours each. W, F, Th, Tu.

Miss Pasmore.

SPANISH

A21a, A21b. ELEMENTARY. Olmstead and Gordon's Spanish Grammar. Padre Isla's Gil Blas de Santillana; Larra, El Capitán Veneno or El Sombrero de Tres Picos; selections from Becquer; conversation and dictation.

Freshman and Sophomore years, both semesters. 3 hours each. W, F, Th, Tu.

Miss Gaylord and Miss Anderson.

B23a, B23b. CONTEMPORARY SPANISH NOVEL. Selections from the works of Pérez Galdós, Valera, Pereda, Blasco Ibañeta, and others; during the second semester attention is given to the literary development in Spanish America, with reading of Isaacs's María.

Prerequisite: Spanish A21, or equivalent.

Freshman and Sophomore years, both semesters. 3 hours each. VI.

Professor Jones.

C24a, C24b. COMPOSITION AND COMMERCIAL CORRESPONDENCE. An intermediate course in composition and epistolary usages, required of those majoring in Romance Languages and specializing in Spanish.

Prerequisite: Spanish A21, or equivalent.

Freshman and Sophomore years, both semesters. 2 hours each. A
(In 1919-1920 C24a receives but one hour credit.)

Miss Anderson.

C25. THE GOLDEN AGE OF SPANISH LITERATURE—
DRAMA. A critical study of the works of Lope de Vega
Tirso de Molina and Calderón. Lectures upon the history
of Spanish literature. This course and all to follow are con-
ducted entirely in Spanish.

Prerequisite: Spanish B23, or equivalent.

Junior and Senior years, first semester. 3 hours. VII.

Professor Jones and Miss Anderson.

C26. SPANISH PROSE OF THE SIXTEENTH AND SEVENTEENTH CENTURIES. Lazarillo de Tormes and the Picaresque novel; Cervantes, readings from *El Quijote* and *Novela Ejemplares*. Lectures upon the history of Spanish literature; collateral readings and assigned topics.

Prerequisite: Spanish B23, or equivalent.

Junior and Senior years, second semester. 3 hours. VII.

Professor Jones and Miss Anderson.

C27a, C27b. CONVERSATIONAL SPANISH. An advanced course in Spanish composition and conversation, a practical course designed especially for those fitting to teach Spanish and may be taken only following or accompanied by Spanish C25 and C26.

Junior and Senior years, both semesters. 1 hour each. Th
VIII.

Professor Jones.

(Not given in 1919-1920.)

D28a, D28b. AMERICA DEL SUR. An advanced conversational course, covering a study of the principal countries of South America from the point of view of their literature, geography and history. Coester: Literary History of Spanish America, Isaac's María, and other works from South American authors.

Prerequisite: Spanish C25 and C26.

Junior and Senior years, both semesters. 3 hours each.

Professor Jones.

(Not given in 1919-1920.)

ITALIAN

C31a, C31b. ELEMENTARY. Hossfeld's Italian Grammar; more (De Amicis); I Promessi Sposi (Manzoni); short stories and plays from modern authors; drill in pronunciation and composition.

Sophomore and Junior years. 3 hours each. XI.

Associate Professor Jones.

D33. ITALIAN CLASSICS. Boccaccio, Ariosto and Tasso. Lectures upon the history of Italian literature. This course and D34 are conducted in Italian.

Prerequisite: Italian C31, or equivalent.

Junior and Senior years, first semester. 3 hours each.

Associate Professor Jones.

(Not given in 1919-1920.)

D34. DANTE AND PETRARCH. The Inferno, with selections from the Purgatorio and Paradiso; Le Rime Petrarca), edition Suc. Le Monnier, Florence. Lectures upon the history of Italian literature.

Prerequisite: Italian C31, or equivalent.

Junior and Senior years, second semester. 3 hours. A.

Associate Professor Jones.

(Not given in 1919-1920.)

SECRETARIAL

A1a, A1b. STENOGRAPHY AND TYPEWRITING. Work in either Stenography or Typewriting may be taken separately without college credit.

All years, both semesters. 3 hours each. III, and one laboratory period. A.

Assistant Professor Thomson.

Laboratory fee, \$7.50 per semester.

A3a, A3b. FILING AND REFERENCE. This course takes up the various methods of indexing and filing used in business houses and the study of reference books that might be useful in a business office.

Freshman and Sophomore years, both semesters. 1 hour each. F, IX.

Miss Ewing.

Laboratory fee, \$7.50 each.

A24. CORRESPONDENCE. See English A24.

SOCIOLOGY

(*See Economics and Sociology*)

SPANISH

(*See Romance Languages.*)

ZOOLOGY

B11. GENERAL ZOOLOGY. Lectures and laboratory work. Types of classes and phyla of animals dissected and studied and careful drawings made of parts and organs. Constant use of the microscope. The large collections of the museum used for illustrative purposes. (Parker, Haswell, Brooks and other books of reference.)

Class room, two hours a week; laboratory, one exercise a week. Prerequisites: Biology A1 and A2, or equivalents.

Sophomore and Junior years, first semester. 3 hours. Class room, T, Th, II; laboratory, M, 1:15-4:10.

Assistant Professor Munz.

Laboratory fee, \$5.00.

B12. GENERAL ZOOLOGY. A continuation of Zoology B11. A broad treatment of the comparative anatomy and morphology of vertebrates, based upon detailed work with representative types of the fishes, amphibians, reptiles, birds and mammals. Laboratory work with skeletons and preserved specimens.

Class room, two hours a week; laboratory, one period.

Prerequisites: Physiology B3 or Zoology B11.

Sophomore and Junior years, second semester. 3 hours. T, Th, I; laboratory, M, 1:15-4:10.

Professor Hilton.

Laboratory fee, \$5.00.

B18. ENTOMOLOGY. The anatomy and physiology of insects studied and their life history traced. Insects reared and their transformation studied; species of all orders identified by use of laboratory manuals. A good collection of native and exotic insects is at the command of the student. Laboratory and field work made prominent.

Class room, two hours a week; laboratory, one exercise a week.

Prerequisite: Biology A1, or Physiology B3, or Zoology B11.

Sophomore, Junior, and Senior years, second semester. 3 hours.

Class room, M, W, VII; laboratory, T, or Th, 1:15-4:10.

Professor Hilton.

Laboratory fee, \$5.00.

C31. SYSTEMATIC INVERTEBRATE ZOOLOGY. Local groups of invertebrates exclusive of insects are studied in the field and laboratory. The particular groups considered are: Diplopods, chilopods, arachnids.

Prerequisite: Zoology B11 or B18.

Sophomore or Junior year, first semester. 3 hours. Lecture, one

hour a week; laboratory and field work, two periods a week.

Professor Hilton.

Laboratory fee, \$5.00.

(Not given in 1919-1920.)

C32. SYSTEMATIC VERTEBRATE ZOOLOGY. Local vertebrates, especially birds, but also amphibia, reptiles, and mammals studied in the laboratory and in the field.

Prerequisite: Zoology B11.

Sophomore or Junior year, second semester. 3 hours. Lecture, one hour a week; field and laboratory work, two periods a week. A.

Professor Hilton.

Laboratory fee, \$3.00.

D33. COMPARATIVE NEUROLOGY. Comparative anatomy of the central nervous system of vertebrates. The laboratory work consists of special dissections and the study of microscopical preparations.

Prerequisites: Zoology B11 and B12, or Physiology B3 and B4.

Junior and Senior years, first semester. 3 hours. Lecture, one hour a week; laboratory, two periods a week. A.

Professor Hilton.

Laboratory fee, \$5.00.

(Not given in 1919-1920.)

C13. ADVANCED ZOOLOGY. A study of special groups of invertebrates or vertebrates well represented in California and on the West Coast. A continuation of Zoology B11 or B18, chiefly laboratory and field work.

Prerequisite: Zoology B11 or B18.

Junior and Senior years, first or second semester. 2 or 3 hours. A.

Professor Hilton.

D15. ADVANCED ZOOLOGY. A continuation of Zoology C13.

Prerequisite: Zoology C13. Field work and laboratory.

Junior and Senior years, either semester. 3 hours. A.

Professor Hilton.

Laboratory fee, \$7.00.

D19, D20. SPECIAL ENTOMOLOGY. Detailed investigations into the anatomy, life histories and economic relations of some of the groups of insects most prejudicial to the interests of mankind. Designed especially for those students intending to become growers, planters, economic entomologists, or doctors of medicine.

Prerequisites: Zoology B11 and B18.

Junior and Senior years, first and second semesters. 3 hours each. Field work and laboratory. A.

Professor Hilton.

Laboratory fee, \$7.00.

ADMINISTRATION

REGISTRATION

All students are required to register on one of the regularly announced days of registration preceding the opening of class work of each semester. A fee of two dollars is charged for later registration and a payment of one dollar for a change in the list of subjects chosen. This latter payment is remitted in the case of new students registering for the first time, provided the changes are made within a week of the opening day of the registration period.

Students are admitted only to those courses for which they are formally registered.

MATRICULATION

Matriculation implies the meeting of all entrance requirements and the proven ability to carry college work. To the end the standing of all new students is provisional until after they have been in residence for one semester. At that time those are matriculated who have shown themselves in accordance with the spirit of the College, who have done a satisfactory quality of work during their semester of residence and whose entrance units are acceptable.

ELECTION OF COURSES

On or before the first Saturday in January after Christmas recess, and the first Saturday in June, all resident students must fill out a schedule listing their choice of subjects for the following semester.

Changes from this schedule may be made upon the payment of a fee of one dollar. Failure to prepare a schedule at the appointed time subjects the student to a

two dollars. Students may not select less than twelve hours of work without the special permission of the Classification Committee.

PUBLIC ASSEMBLIES

Devotional exercises conducted by the President, members of the faculty, or by some invited guest, are held in the Chapel Monday, Wednesday and Friday mornings, and all students are expected to be present.

On alternate Thursday mornings the regular and called meetings of the Associated Students are held from time to time.

Attendance upon the Sunday morning service in the Claremont Church is expected except in cases where permission is given to attend services elsewhere. Such permission will be granted on request.

REPORTS

A record of the scholarship and deportment of each student is kept, and deficient students are reported to the Registrar. Special reports are made at or near the Thanksgiving and Spring recesses; notification is sent to the parents of any students reported as deficient then, or at the end of the semester. Grades will be sent at any time upon request of students.

The grade of scholarship is determined by the daily work in the class-room supplemented by frequent test reviews and final examinations.

The aim is to encourage faithfulness and regularity in daily work rather than spasmodic effort to meet some single test.

PHYSICAL ATTENTION

The physical care of students is a matter of special concern to the College and the advantages of unusual attention and opportunity are offered. The climate of Southern California

offers an out-of-door life the year around. Oversight given to open-air athletics in all seasons. A regular physician is on the faculty of the College under whose direction every student on entering has a physical examination. Regular work in Physical Culture is prescribed throughout the four years, and courses in Physiology and Hygiene are given. A large swimming pool is provided, access to which is free to all students, subject only to a semi-annual physical examination. The medical advice of the College physician is ordinarily available free of charge to all students, subject to certain conditions of hours and location of residence, the College meeting these bills; providing that all nursing, surgery, dressing, and medicines are at the expense of the ill or injured. *The College, however, reserves the right to discontinue this individual medical service at any time without previous notice.* As a natural result of all this attention to the health of the College is such as to give special assurance to all considering attendance at Pomona.

GENERAL REQUIREMENTS

Students are expected to be loyal to the spirit and purpose of the institution and to maintain regular attendance on all college appointments. Any who fall below grade in scholarship, or who for any reason do not prove desirable members of the student body, may be dismissed without special charges.

It is urgently pointed out to both students and parents that the value of a college education consists in no small degree in the fullest participation in the college atmosphere and life. It is important, therefore, that all absence through the college year should be avoided. Some of the most important of the college values are lost by absences on Saturday and Sunday on which days are centered particular and vital phases of the

common life, and it is therefore urged that over-Sunday visits at home or elsewhere be avoided.

The use of tobacco is disapproved and discouraged at all times.

A copy of the Circular of Information may be obtained by application to the Registrar. It should be in the hands of all students.

EXPENSES

ROOMS. Lists and descriptions of rooms available for men students are kept at the Business Office, for women students at Sumner Hall. Furnished rooms outside the College building are rented at prices ranging from thirty to sixty dollars for the semester. Students are permitted to room only at places approved by the faculty.

To avoid misunderstanding between students and householders, it is advised that agreements regarding rooms be put in written form. Unless written agreement to the contrary is made, it will be assumed that rooms are rented for one semester.

Change of rooms is made only by permission of the faculty.

DORMITORIES—*Sumner Hall.* Women not living at their homes, unless excused by the faculty, are expected to room in Sumner Hall, which accommodates seventy. This is a commodious and pleasant hall, where the young women are under the direct care of the Dean of Women. In addition to the parlors, which are open to the students for the reception of their friends, there is also on the first floor a large and attractive recreation hall.

Sumner Hall is well equipped with all modern conveniences, including electric lights, steam heat, baths, and a laundry furnished with stationary tubs and electric irons for the use of roomers.

There are both single and double rooms, which are well lighted and ventilated. Each room is provided with the necessary furnishings, including rug for the floor. The only articles to be supplied by the students are towels, and linen and covers for a single bed.

Careful attention is given to the health of the young women residing in the Hall. Illness is rare, yet for such cases as occur, there is provided, opening directly from the matron's room, a pleasant, sunny rest-room, where patients are given the best of care.

Rooms in Sumner Hall are rented for the College year, each occupant paying from fifty to eighty dollars, according to the location of the room and the number of occupants. The Hall is closed during the Christmas and Spring vacations. A deposit of five dollars is necessary to secure a room in the Hall, and should accompany the application. Rooms are assigned in order of application. The deposit fee is credited on the rent of the room.

The Hall is opened on the Saturday before the beginning of the College year and closed the Thursday after Commencement.

SMILEY HALL. This dormitory for men has both single rooms and suites of three rooms accommodating two students. The dormitory has all modern conveniences and is completely furnished. The only articles to be provided by the students are towels, and linen and covers for a single bed. All rooms are equally desirable, the basis of choice in most cases being one's preference for the eastern or western outlook.

Rooms in Smiley Hall are rented for the College year, each occupant paying seventy dollars. In case of withdrawal because of sickness an equitable adjustment of rent will be made.

These terms do not include the use of the dormitory during the Christmas and Spring vacations, when the Hall will be closed, unless a number desire to remain, in which case the cost of keeping the building open will be an additional charge. Damage to rooms will be charged to the occupants.

A deposit of five dollars is necessary to secure a room, and should accompany the application. This amount will be retained as a breakage fee from which deductions will be made for all individual and communal damages to the building, the balance being returned at the end of the year. The dormitory is opened on the Saturday before the beginning of the college year and closed the Thursday after Commencement. The College reserves the right to dismiss from the dormitory without rebate any student who has shown himself a disturbing or undesirable occupant.

BOARD. In the College Commons, an unusually attractive and well equipped dining-room in the Claremont Inn, provision is made for the boarding of students under the direct management of the College. A representative committee of students and faculty cooperate in maintaining satisfactory conditions. The rates are the lowest consistent with good quality of food and service, the approximate cost for 1919-20 being two hundred and fifteen dollars.

The Pomona College spirit is due in no small measure to its common dining hall. There the students meet in pleasant surroundings, are waited upon by companions in study, discuss together college topics, join in enthusiastic backing of college teams and glee clubs and have favorable opportunities for forming close and lasting friendships. For these reasons and for its unifying influence on college life, the faculty regard it as exceedingly desirable that students should board in the Commons.

Those wishing to board at other approved places may do

so by permission of the faculty, but such permission will rarely be given to those living in the College buildings.

SUMMARY OF EXPENSES—The necessary expense for the College year, exclusive of fees for special courses and expenses which are purely personal, varies from \$350 to \$500. Bills are due each semester in advance and must be paid upon registration. If parents desire bills to be sent home, a written request should be made before the beginning of the semester.

No student will be retained in the institution or given honorable dismissal whose bills are not paid or arranged for.

TUITION

All tuition bills must be paid at the beginning of each semester. Until this has been done cards entitling the student to admission to classes will not be issued.

GENERAL CHARGES

Regular tuition, including all general privileges, Music and Lecture Course Ticket, Gymnasium and Library privileges, etc., per semester.....	\$62.
Tuition for students carrying less than twelve hours of work, for each such hour, per semester, exclusive of above general privileges	5.

CHARGES IN MUSIC AND ART¹

For those paying regular tuition:

For each half-hour private lesson in music per week, per semester

For each two-hour class lesson per week in art, per semester 18.

For those carrying less than twelve hours of college work, exclusive of work in music or art:

¹Students may register for Applied Music at any time. Such students, they enter during the semester, should consult the Registrar as to charges.

For one one-half hour private lesson in music per week, per semester	45.00
For two half-hour private lessons in music per week, per semester	75.00
For each half-hour private lesson in excess of two, per semester	30.00
For each two-hour class lesson in art per week, per semester, for the first lesson.....	25.00
For each additional lesson.....	18.00
For juveniles (pupils of Florence D. Russell) under high school age, and not given college privileges:	
For one half-hour private lesson in piano per week, per semester	21.00
For two half-hour private lessons in piano per week, per semester	40.00
Sketch class, per semester.....	1.00

FEES

Graduation fee, \$10.00.

Physics, Bacteriology and Chemistry, deposit for break-
\$5.00.

Laboratory fees range from \$4.00 to \$15.00. The exact
for a given course is stated in connection with the descrip-
of that course under Departments of Instruction; in
advanced courses only does it exceed \$10.00.

Practice fees for the use of College pianos and organs:

Piano

Half hour daily, per semester (voice students).....	\$ 3.50
Hour daily, per semester.....	6.00
Two hours daily, per semester.....	12.00
Three hours daily, per semester.....	18.00

Grand Piano

Hour daily, per semester.....	\$ 9.00
Additional hours at same rate.	

Great Organ in Bridges Hall

One hour weekly, per semester.....\$ 7.50
 More or less time at same rate.

Practice Organ

Two hours weekly, per semester.....\$ 6.50
 Three hours weekly, per semester..... 8.25
 Four hours weekly, per semester..... 10.50
 Five hours weekly, per semester..... 13.00
 Six hours weekly, per semester..... 15.00

Violin

Room without piano, one hour daily, per semester.....\$ 1.50
 Additional hours at same rate.

Pedal Organ

One hour daily, per semester.....\$ 9.00

Pedal Piano

One-half the rate for other pianos.

RETURN OF TUITION

After the first week of the semester there is no refunding of any part of the tuition either for courses dropped or for failure to complete a semester's residence, except that one-half of the tuition is refunded to any leaving college before the middle of any semester on account of illness.

HONORS AND PRIZES

COMMENCEMENT EXERCISES

The honor of speaking on Commencement Day is awarded three members of the graduating class who have distinguished themselves in scholarship and who possess literary and oratorical ability.

THE PHI BETA KAPPA SOCIETY

Upperclassmen "who are of good moral character, who are candidates for the degree of Bachelor of Arts, and who are distinguished for breadth of culture and excellence of scholarship," are eligible to membership in the Phi Beta Kappa Society.

FINAL HONORS AT GRADUATION

Those students who have two hundred or more credits are graduated with the honor *cum laude*; those who have two hundred and fifty or more credits are graduated with the honor *magna cum laude*; and those who have three hundred or more credits are graduated with the honor *summa cum laude*.

SCHOLARSHIP HONORS

Honors for scholarly attainment are awarded at the end of each semester to matriculated students, candidates for the bachelor of arts degree, as follows:

High Honors are awarded to those who have attained an average of A grade.

General Honors are awarded to those who fall short of an average of A grade by not more than the equivalent of the B grade in a three-hour subject.

Departmental Honors are awarded to those who attain a double A grade in any subject.

Honors are granted in no case where a student has grade below B in any subject.

PRIZES

The following prizes are offered for proficiency in the work of the several departments:

THE LLEWELLYN BIXBY MATHEMATICS PRIZE. A prize for excellence in Analytic Geometry and Calculus; open to all students complying with specified conditions. A prize of ten dollars is given by Mr. Llewellyn Bixby.

THE DOLE PRIZES. A prize debate, open to the Sophomore class upon some subject selected by the faculty, is arranged for the close of the second semester. First and second prizes of ten and five dollars respectively, established by the late Mr. J. H. Dole, in memory of his brother, Mr. W. B. Dole, are endowed by Mr. J. Albert Dole and Mrs. A. M. Dole.

THE HAGER PRIZES. Prizes for best three essays on a foreign missionary subject, open to all students. Prizes of five dollars each are endowed by Mr. and Mrs. C. R. Hager.

THE KINNEY PRIZES. A prize declamation contest, open to the members of the Freshman class, occurs toward the end of the first semester. First and second prizes of ten and five dollars, respectively, are given by Mrs. H. N. Kinney.

THE LORBEER PRIZES. Prizes for the best essay on the subject "How to Keep Well"; open to all who take the course in Anatomy and Physiology. First and second prizes of fifteen and ten dollars respectively, are given by Dr. Thomas L. Lorbeer, '03.

THE MONCRIEFF ASTRONOMY PRIZE. A prize given to the student in the first year course in Astronomy, taken regularly in class, who shows interest in the study and proficiency in the observatory work as indicated by the best notebook kept in accordance with the teacher's suggestion. A prize of ten dollars is given by Miss Flossie Moncrieff, '11.

THE MUDGE LATIN PRIZES. Prizes for excellence in Latin offered sophomores completing Latin D14. First and second prizes of ten and five dollars respectively are endowed by friends of the College.

THE VAILE PRIZES. Prizes for the best essay or oration on the general subject of Agriculture in Southern California; open to the Junior and Senior classes. First and second prizes of ten and five dollars, respectively, are endowed by Mr. Charles S. Vaile.

SCHOLARSHIPS AND BENEFICIARY AID

The income of certain funds is used toward paying tuition fees of students who are in pecuniary need, and, with the authorization of the trustees, is distributed annually through a committee of the faculty. Scholarship aid is given only to students who are or intend to become candidates for a degree from Pomona College, who maintain a high standard of honor, who are economical in their habits, who do not use tobacco, who are regular in their attendance upon college exercises, and whose scholarship meets the following conditions: The earning in each semester of the Freshman year of at least twelve credits; in each subsequent semester of at least fifteen credits.

Applicants for aid who have not yet entered college should forward to Professor H. E. Robbins, Chairman of the Committee on Scholarships, a formal application accompanied by two letters, one from parent or guardian and the other from principal or teacher, giving information concerning need, character and attainments. They should also submit a certified statement of their scholastic record. All applications for aid must be renewed annually on or before March first.

Aid may be withdrawn at any time from students who prove not to have conformed to the conditions, and is permanently withdrawn after the second forfeiture due to standing or unsatisfactory deportment.

Recipients of scholarship aid may be called upon to assist the College in ways that do not interfere with their studies.

Awards are made from the income of the following funds:
THE FRANCIS BANCROFT MEMORIAL FUND, \$1,500. Given by Mr. James T. Ford of Los Angeles, California, in memory of his father.

und of \$2,500. Given by L. H. Barrows.

H. G. BILLINGS MEMORIAL SCHOLARSHIP, \$1,000. Given by Mrs. A. Billings of Los Angeles, California, in memory of her husband.

MABEL S. BRIDGES MEMORIAL SCHOLARSHIP, \$3,500. Given by Mr. and Mrs. A. S. Bridges of San Diego, California, in memory of their daughter. Available for women.

BRISTOL MEMORIAL FUND, \$400. A fund raised as a memorial to the Reverend Sherlock Bristol.

HENRY HERBERT BROWN SCHOLARSHIP FUND, \$1,000. Given by Mrs. Fannie E. Brown of Los Angeles, California, in memory of her son.

und of \$471.41. Given by the Class of 1917 towards the founding of a scholarship.

und of \$195.78. Given by the Class of 1918 towards the founding of a scholarship.

AGNES K. CRAWFORD MEMORIAL FUND, \$1,000. Given by David Crawford and William Crawford of Pomona, California, in memory of their mother.

und of \$2,600. Given by Mary E. Elwood of Redlands, California.

und of \$2,500. Given by Rev. James T. Ford of Los Angeles, California.

General Fund of \$475.

und of \$5000. Given by Charles E. Harwood, LL.D., of Upland.

und of \$5000. Given by Alfred P. Harwood of Upland.

THOMAS F. HOWARD MEMORIAL SCHOLARSHIP, \$2,000. Given by Dr. and Mrs. H. G. Brainerd of Los Angeles, California, in memory of Mrs. Brainerd's father.

und of \$2,000. Given by Henry L. Kuns.

und of \$1,800. Given by Miss Jean Loomis, '97, of Nanking, China.

ONTARIO CONGREGATIONAL CHURCH FUND, \$161.50. Given by the Ontario Congregational Church towards the founding of a scholarship.

und of \$5,000. Given by Mrs. Loraine H. Page of Pomona, Cali-

fornia. (\$3,000 of this may at some time be used for other purposes.)

THE ARTHUR WARREN PHELPS MEMORIAL SCHOLARSHIP, \$2,000. Given by Mrs. C. S. and Mr. C. A. Phelps of Claremont in memory of their son and brother.

THE LYDIA PHELPS MEMORIAL FUND, \$4,000. Given by Hiram Phelps of Ontario, California, in memory of his wife.

THE PILGRIM CHURCH OF POMONA FUND, \$469.74. Given by the Pilgrim Congregational Church of Pomona towards the founding of a scholarship.

THE JOHN D. POTTER MEMORIAL FUND, \$2,000. Given by Mrs. S. T. Potter of Westboro, Massachusetts, in memory of her husband.

THE REMBRANDT CLUB SCHOLARSHIP. The sum of twenty dollars a semester. Available for students in Art.

A Fund of \$1,800. Given by Dr. Anna H. Searing of Escondido, California.

THE CLYDE H. SHIELDS SCHOLARSHIP, \$200 (to be increased). Given by R. P. Shields of San Diego in memory of his oldest son, who was drowned in 1894, when about twenty-one years of age.

A Fund of \$2,000. Given by Miss Susan E. Thatcher of San Diego.

A Fund of \$1000. Given by Mrs. Maria T. Wardwell of Plymouth, Connecticut.

A Fund of \$2,000. Given by Henry S. West of Los Angeles.

The College also administers a loan fund, established by George H. DeKay, Jr., in memory of his brother Frelin Campbell DeKay. By means of this fund, it is possible to co-operate in a moderate way, and temporarily, with the pressing need of students. This fund has been of such important service as to indicate the great need for the increase of such resources, which in the hour of special emergency may often save a student to a college career.

SELF-SUPPORT

A committee of the faculty endeavors to find employment for students needing to earn a part of their expenses. Many

re thus helping themselves by various forms of labor such as janitor work, waiting on tables at the Commons, general house work, gardening and the like. The most desirable positions are in general secured by upper-classmen who have proven themselves good workers and good students, and those coming to the College for the first time should be content if any work which they can satisfactorily do is secured for them. Students in any case should come prepared to pay all bills for at least one semester. Their record during this semester will be a large factor in deciding what opportunities for self-help will be open to them. Applications for aid in securing employment should be addressed to Professor H. E. Robbins, Chairman of the Committee on Student Aid and Labor.

BUILDINGS AND EQUIPMENT

The College grounds consist of about one hundred acres, of which sixty are included in Blanchard Park, about ten in Alumni Field, and the remainder in the campus proper.

There are fifteen buildings on the campus, heated from a central heating plant.

The Mary L. Sumner Hall, named in memory of the wife of Professor Charles B. Sumner, is a dormitory affording accommodations for seventy women.

Holmes Hall, a memorial of Cyrus W. Holmes, Jr., of Monson, Massachusetts, reconstructed in 1916 in conformity with more modern plans for buildings and campus, is devoted mainly to chapel, recitation rooms, and various offices of administration.

Pearsons Hall of Science, the gift of Dr. D. K. Pearsons, contains the museum, and the laboratories and lecture rooms of the departments of chemistry, botany, physics and geology. In this building, too, is the Business Office.

The museum is equipped especially for the work in biology, botany and zoology. It contains an abundance of good synoptical material, including about two hundred and fifty thousand zoological specimens and an herbarium of about two hundred thousand sheets of plants. The Seaver-Rivers collection contains fifty thousand specimens of fossil Mollusca collected in the Pliocene of Santa Monica, California, by Dr. Rivers, formerly Curator of the Museum of the State University.

The chemical laboratories are equipped with hoods, gas generators, steam baths, and the usual appliances demanded for thoroughly good work. The department is equipped throughout with water, gas and electricity and has individual desks, and equipment for one hundred and eight students.

The physical laboratories are well equipped with apparatus selected from standard patterns of the best domestic and foreign instrument makers. Each year valuable additions are made to the equipment.

The biological laboratories contain an extensive series of skeletons and models for use in comparative anatomy. For laboratory work, in general and advanced zoology, there is abundant material, both wet and dry, from all parts of the world. The reference collections for use in general and special entomology are in many respects unexcelled.

The botanical equipment, besides the herbarium, has for use in general mycology a complete bacteriological outfit of sterilizers, incubators, and cultural apparatus.

All of these laboratories possess full batteries of microscopes and microtomes, and are well equipped with all the extensive apparatus and appliances necessary in anatomical, physiological, histological, and embryological work.

The Library, the gift of Mr. Andrew Carnegie, is an imposing structure, exceptionally well adapted to the purposes for which it was built.

The Frank P. Brackett Observatory, the gift of Mr. Llewellyn Bixby, '01, is designed throughout to be of service to the student in the direct study of the stars. It stands in an attractive spot upon an elevation in Blanchard Park. Its equipment includes an equatorial telescope, with a Clark objective of six inches clear aperture, and a mounting, which includes driving clock and other modern conveniences, made by Wm. Gærtner of Chicago, a three-inch astronomical transit and chronograph, both made by the Gærtner Company, a standard Riefler clock for mean solar time, and a less expensive clock for sidereal time; also a horizontal telescope with a six-inch objective, having a focal length of forty feet

and a cœlostat. In connection with this is employed a thirteen-foot spectrograph with a two-inch grating, loaned by the Mt. Wilson Solar Observatory.

The Albert K. Smiley Hall is the dormitory for men. It has both single rooms and suites of three rooms, affording accommodations for eighty students.

Rembrandt Hall, the first section of the Art Building, is devoted chiefly to the work of the Department of Art. The upper floor contains studio and work rooms; the lower floor a convenient auditorium of moderate size for exhibits and assemblies.

The Mabel S. Bridges Hall of Music, the gift of Mr. and Mrs. Appleton S. Bridges, of San Diego, offers opportunities for the study of music unexcelled in Southern California. Besides numerous studio and practice rooms equipped with Steinway pianos, it contains a large auditorium, a four manual pipe organ, a large practice organ, two-manual pedal organ and pedal piano. The building is of reinforced concrete with Spanish tile roof.

The Gymnasium, comprising three large, well-built structures, affords ample equipment for physical training, including swimming pool.

The Claremont Inn has, besides a large student dining room for the College Commons, accommodations for eighty guests.

The Open-Air Theater, built to take advantage of the natural setting of Blanchard Park, though uncompleted, has at present a seating capacity of over 4000. Here are given the senior plays, various concerts and entertainments; and here are held student rallies about bonfires built in the center space.

The Harwood Hall of Botany, the gift of Mr. A. P. Har-

wood, of Upland, erected in the summer of 1915, is a commodious building, containing lecture rooms and laboratories for the use of the Department of Botany. Adjoining it is the Agricultural and Botanical Laboratory, consisting of a greenhouse, a lath house and a central classroom.

The Marine Laboratory, located at Laguna Beach, has nine private rooms for special workers and two general laboratories, as well as storerooms, work rooms and aquarium room.

Various smaller buildings add to the completeness of the College plant.

THE LIBRARY

The College possesses the following library collections in addition to the Main Library: The Cook-Baker Biological Library, the Astronomical Library, the New England Collection, the Mason California Collection, and the Viola Minor Westergaard Art Collection.

The main library, the New England and Mason California Collections are housed in the Carnegie Library Building, the Cook-Baker Library (Zoology section) in Pearsons Hall of Science, and (Botany section) in Harwood Hall, the Astronomical Library in the F. P. Brackett Observatory, and the Westergaard Art Collection in Rembrandt Hall.

The main library is a collection of solid working materials. Although not large it has been carefully selected and represents therefore a working library of exceptional value. Certain departments as English Literature, Economics, History, Biography, Biology, Education, Philosophy, and Psychology have moderate endowments and are therefore proportionately better supplied. Other departments have only small allotments out of general funds but are gradually being provided with endowments.

The Library is a depository for the publications of the Carnegie Institution of Washington, and for the United States Government documents.

June first, 1919, there were 31,966 bound volumes in the Library (not including the Astronomical collection) and 21,554 pamphlets.

The majority of the best scholastic journals are to be found on the periodical shelves in the main library. In addition to these a large number of technical journals are received in exchange for the scientific publications of the College and are kept on file in the departmental libraries.

DEPARTMENTAL ORGANIZATIONS AND CLUBS

THE POMONA COLLEGE Glee Club, the Pomona College Women's Glee Club, the Pomona College Orchestra, and the Pomona College Band are organizations under the general direction of the Department of Music.

THE REMBRANDT CLUB is an organization of students and members of the community which meets once a month for art study, programs on art subjects, and social intercourse.

THE ASTRONOMICAL SOCIETY aims to help the observatory in its work, in building up its library and in the issuing of its publications. The associate membership is drawn from the alumni and friends of the College, while the active membership includes the students of astronomy together with members of the faculty and resident graduates.

THE ZOOLOGICAL SEMINAR.¹ The aim of the Zoological Seminar is chiefly the review and discussion of recent and important researches as published in the zoological journals. Membership is limited to students of the Junior and Senior classes chosen for excellent scholarship and marked interest in the work of the department.

THE MATHEMATICAL SOCIETY. The Society of Pure and Applied Mathematics meets every month for presentation and discussion of results of study and investigation in the physical sciences and mathematics. It is open to advanced students who are interested in these subjects and who agree to take an active part in its work.

THE LITERATURE SEMINAR. The purpose of the Literature Seminar is the presentation from a graduate or profes-

¹The Zoological and Botanical Seminars will be reorganized the second semester as a Biological Seminar.

sional point of view of those masterpieces of literature which have dominated the content and form of other literature. Two sections devoted respectively to foreign language and to English have recently been formed.

THE HISTORY SEMINAR consists of a student group organized to study special phases of contemporary history.

THE BOTANICAL SEMINAR is composed of those students in Botany who are interested in reviewing current literature and discussing botanical history and other phases of the subject not presented in the regular curriculum.

LE CERCLE FRANCAIS, composed of students making a specialty of the French language, meets fortnightly for practice in French conversation, presentation of papers and discussion of topics relating to the various aspects of French life and literature.

EL CIRCULO ESPANOL, composed of students making a specialty of Spanish, meets fortnightly for practice in Spanish conversation and the presentation of appropriate papers in the language, bearing upon the literature and life of the Spanish world.

STUDENT ACTIVITIES

THE ASSOCIATED STUDENTS. This association harmonizes all student activities. Its officers are chosen by the student body from their own number. All important questions are considered by its executive committee, which is composed of those prominent in such varied lines as athletics, oratory, and the editorship of the Student Life. This body has charge of inter-collegiate as well as inter-class relations.

WOMEN'S ORGANIZATION. The women of the student body form a voluntary organization, electing their own officers and committees and holding regular meetings. This organization considers and promotes the social relations of the women.

CHRISTIAN ASSOCIATIONS. Branches of the Young Men's Christian Association and the Young Women's Christian Association are well organized and doing effective work. Representation in the inter-collegiate and state conventions and the visits of active workers from outside serve to maintain interest in the work both at home and abroad. Through the co-operation of the associations and the College there have been established, as a part of the curriculum, courses in Bible study adapted to all classes of students and conducted by members of the faculty.

THE POMONA COLLEGE LITERARY SOCIETY, composed of both men and women, meets every two weeks. The work is varied in character, covering all literary lines.

THE POMONA COLLEGE DEBATING CLUB is composed of men. It meets every two weeks for prepared and impromptu debates on the live issues of the day.

THE ALPHA KAPPA is a society for women, giving drill in debates and familiarity with important current topics.

THE POMONA COLLEGE LYCEUM, composed of men, is also a debating club, and meets bi-weekly.

THE AREOPAGUS is composed of men. The object of the society is to promote efficiency in public speaking, debate, and parliamentary drill. Meetings are held every two weeks.

THE DELTA LAMBDA is a debating society for women meeting bi-weekly.

THE MASQUERS is an organization of students, whose purpose is the study and presentation of plays and the general promotion of the dramatic enterprises of the undergraduate body.

ATHLETICS. The direction and financial management of athletics rest with the head of the Department of Physical Education, who has associated with him as an advisory body the Athletics Council, composed of three members of the Faculty and three students. Under the general manager there is a student manager for each sport.

Alumni Field, consisting of about ten acres, has been developed by the alumni into athletic grounds unsurpassed in the Southwest in equipment and beauty of setting. First class tennis courts, an excellent track, baseball and football fields, also hockey and basket ball courts are within the limits of the campus, and athletic exercises and field sports are encouraged by the officers of the institution.

A swimming pool, of the standard size for water polo, and fully equipped with modern appliances, is open to all students. An invariable condition to the use of the pool is a semi-annual medical examination.

Students are required to maintain a certain standard of excellence in all their studies in order to represent the College on any of its athletic teams or other organizations coming before the public.

PUBLICATIONS

The stated publications of the College are issued as numbers of the *Pomona College Bulletin*, which is published bi-monthly. These include:

The Annual Directory of Faculty and Students.

The Annual Catalog.

The Annual Register of Alumni.

The Annual Register of Faculty and Students.

The Annual Announcement of Courses.

Alumni and departmental publications are:

The Pomona College Quarterly Magazine, devoted to the interests of the College and Alumni.

The Journal of Entomology and Zoology, published under the auspices of the Department of Zoology.

The Publication of the Astronomical Society of Pomona College, published under the auspices of the Department of Astronomy.

STUDENT PUBLICATIONS

The *Student Life* is published semi-weekly by the student body and is devoted to current affairs.

The *Metate* is published each year by the Junior class, and contains material appropriate to a college annual.

The *Association Hand Book*, which contains material of value, especially to new students, is issued at the beginning of the year by the Christian Associations.

BUREAU OF APPOINTMENTS

A Bureau of Appointments is conducted in connection with the office of the Secretary of the Faculty for the benefit of members of the College who desire to teach after graduation. The purpose of the Bureau is to maintain a list of available positions and to recommend from the applicants registered those who are qualified for specific positions.

An opportunity is also offered graduates of the College who are already engaged in teaching, to register their present positions and to indicate whether they desire a change, and if so, under what conditions. An effort is made to further the desires of graduates so far as made known. The services of the Bureau are entirely gratuitous. Communications should be addressed to Professor M. E. Churchill, Secretary of the Faculty.

THE ASSOCIATION OF COLLEGIATE ALUMNAE

The Association of Collegiate Alumnae organized in 1899 by prominent college women for the "maintenance of high standards of education," and including at the present time forty-five leading universities and colleges, includes Pomona College in its membership. Women graduates of Pomona College may become members of any of the local branches of the Association, and for any who are not within reach of such branches there is a provision for a general membership. The general membership fee of one dollar may be sent to Mrs. Katharine P. Pomeroy, 938 Glengyle Place, Chicago, Ill., and entitles one to all membership privileges, including the Quarterly Journal.

SUMMARY OF STUDENTS

NOVEMBER, 1919

Graduate students	2
Seniors	95
Juniors	117
Sophomores	196
Freshmen	250
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Total Enrollment	685

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